AN OUTLINE OF MONEY

by

GEOFFREY CROWTHER
Editor of *The Economist*

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PREFACE

This book has only one object—neither to propound new refinements in the theory of money nor to advocate any particular monetary policy, but quite simply to explain the 'how it works' of our present monetary system. I have not consciously shirked any difficulty, but I hope readers and critics will bear in mind that the purpose of the book is not to achieve any formal completeness—for which the student can be referred to a large number of excellent textbooks—but to provide a first view for the layman of the main contours of an extensive field of knowledge.

The book has been a long time in the writing. A first version was begun in 1932 and finished in 1935, but I do not think that many sentences of it have survived. This final version was all but complete when the war broke out. The war and its aftermath will teach us a great deal about money. Many of the emphases will shift and monetary institutions will change. It might seem foolish to publish a book on money, most of whose examples are drawn from the pre-war era, when that era has already closed. But there is some reason for thinking that the changes may not be so severe this time as they were in and after the war of 1914–1918. Then there was a long-established and smoothly working system to destroy. Now we have already had monetary chaos for almost a decade; we have been forced to do a great deal of hard and untrammelled thinking; we have already been faced with problems very closely

akin to those of war ; and we have been compelled to look behind the formal façade of institutions like the gold standard and inquire into the basic realities. I am bold enough to hope that, if this book comes to be read after the war, though many of its examples will be outmoded, the statements of monetary principle will be found to be, perhaps incomplete, but not incorrect.

Apart from a few passages in the last chapter, there is nothing original in this book. It follows that I have borrowed almost everything in it, and I ought to render thanks for the loans. But it is impossible even to remember the many sources from which one has drawn this thought and that belief; I can only single out a few. To three of my predecessors as Editor of *The Economist*—Walter Bagehot, Mr. Hartley Withers, and Sir Walter Layton—I owe not only enlightenment but shining examples of the art of making monetary matters both intelligible and readable. To Mr. J. M. Keynes I owe, as every monetary economist of my generation owes, a debt whose magnitude will be apparent from the book. From time to time one may wish to pick a particular bone with Mr. Keynes, but the backbone of our present monetary doctrine is more of his construction than of anybody else's ; I do not think it is possible to exaggerate the extent to which thinking on monetary matters has been transformed, whether always in agreement with him or not, since the appearance of his *Treatise on Money* in 1930. For all members or past members of the Cambridge school of economists, Professor D. H. Robertson has played an equal part in building the modern theory of money—as Mr. Keynes has acknowledged, it is difficult to know where the one begins and the other leaves off; but I also owe to Professor Robertson the personal debt that pupil owes to teacher. For help with specific points I am indebted

to Dr. Thomas Balogh, Mr. Douglas Jay, and Mr. J. D. G. Kellock. I have been given great assistance in the ardours of proof-reading by Miss Patricia Counsell and Miss Lynette Mills, who have also compiled the index. I owe the greatest debt of all to Professor George O'Brien, without whose encouragement the book would never have been begun, and to my wife, without whose kindly insistence it would never have been finished.

G. C.

LONDON,
September, 1940.

AN OUTLINE OF MONEY

Chapter I

THE NATURE OF MONEY

THE INVENTION OF MONEY

WHAT is Money? That is a question which few people can answer, although nearly everybody thinks he knows the answer. It is reminiscent of the man who was asked to define an elephant, and could only reply that he would know one when he saw one. Everybody knows in practice what constitutes money, but few people would be prepared at a moment's notice to define money, to indicate precisely what differentiates money from other articles or commodities. This book is concerned with money, and it is an obvious preliminary to make it quite clear what we are talking about. But it will take a whole chapter to define money, and even then the definition can only be made intelligible to the layman by means of description. The dictionary defines an elephant as 'a mammal of Africa and India, having the snout prolonged into a prehensile proboscis'; but this would hardly be of much assistance in identifying the animal. Similarly, the dictionary definition of money as 'anything having a customary or conventional use as a medium of exchange or a measure, or denominator, of value' is comprehensive, but hardly precise or illuminating.

We may well begin on our task of describing money by relating the history of its development. This history is partly imaginary, though anthropological research has confirmed much of it. But in any case we are more concerned with the orderly logical development of the ideas now embodied in money than with scientific anthropology, and imagination may be allowed occasionally to usurp the place of recorded fact.

In the earliest stages of Man as a commercial animal, his trading consisted entirely of barter. The hunter exchanged his hides and pelts and meat for the corn and straw of the tiller of the soil. And both, in a slightly later stage, traded their products for the wares of the village craftsman. Now barter as a method of trade has several grave defects. One of these is the difficulty of settling on terms. The relative values of two or three of the more important articles of trade may be well known. It may, for example, be a convention of long standing that ten bushels of corn exchange for one cow. But how are the values of less actively traded commodities to be established? How many bushels of corn should exchange for one tiger-skin? And how many bananas for a goat? And how many pigs for a new wife? These are the commercial problems of private barter, and they are obviously not easy to solve. The first function of money is to help with the solution of these problems. Suppose that everything is valued in terms of one commodity. Let us suppose that this one commodity is the goat (as it is to-day among some East African tribes). Everything is valued in terms of the goat, and the terms of exchange between any pair of commodities can thus be easily established. A hunting-knife is worth ten goats, fifty bananas are worth one goat, five bushels of corn are worth two goats, a wife, if she is young and comely, is worth six goats—and so

on for every commodity. To us this invention seems very simple. It is merely the application to the sphere of value of the same idea that has produced the foot or the metre to measure length, the pound or gram to measure weight, the degree to measure temperature, and so forth. But at the time it was doubtless radical—the invention, perhaps, of some lazy genius who found himself oppressed by the task of calculating how many bushels of corn should exchange for one tiger-skin, if three bushels of corn were equal to five bananas, twenty bananas to one goat and twenty goats to one tiger-skin. And it undoubtedly was an invention ; it needed the conscious reasoning power of Man to make the step from simple barter to money-accounting.

This is the first of the three primary functions of money. It serves as a unit of account. It acts as a yardstick, or standard measure, of value to which all other things can be compared. Trading is still a simple exchange of goods for goods : bananas are still exchanged for corn, ox-hides for straw. But the terms of exchange are now fixed by reference to one standard commodity. The community is on the goat-standard. Money has arrived.

The establishment of a unit of account, however, does not remove all the difficulties of barter. There is still the difficulty of bringing the two parties together. John may have corn and want ox-hides. But Henry who has ox-hides may not want corn, and William who wants corn may not have any ox-hides. In a simple community where commodities are few, these difficulties can be overcome. But with every new development of commerce, with every fresh division of labour, with every extension of the list of commodities in trade, barter becomes more and more difficult. This difficulty also is solved by money. The unit of account becomes

also a medium of exchange. Corn is no longer *exchanged* for ox-hides ; corn is *sold* for goats, and goats are given in payment for ox-hides. Anything can be exchanged for goats, and goats can be exchanged for anything. In every transaction, money now not only fixes the terms, but mediates in the exchange. What was formerly a single exchange of corn for hides becomes a double exchange of corn for goats and goats for hides. The seller of corn need no longer seek out the seller of hides. They do their business through an intermediary. Money has become the first broker.

These two functions of money, its function as a unit of account and its function as a medium of exchange, are the two fundamental essentials. But there is a third whose importance is hardly less. In a barter economy the rich man is he who has a large store of things he wants. He must have fields to grow corn, forests in which to hunt game, animals to bear burdens and supply milk, servants to till the fields, hunt the game, and care for the animals, barns to keep stores against a poor year. But with the coming of money the acquisition—or at least the safekeeping—of wealth becomes a simple matter. For if goats are money, they will buy corn and game and domestic animals, they will hire servants and purchase other people's stores in time of famine. The rich man needs to do no more than keep his wealth in the form of goats. Money will serve as a store of value—and this is its third function.

Any substance or commodity which is to serve as money must perform these three functions. Together they constitute the invention of money. All later developments of money are merely refinements upon the primitive essentials. Money is one of the most fundamental of all Man's inventions. Every branch of knowledge has its fundamental discovery. In mechanics

it is the wheel, in science fire, in politics the vote. Similarly, in economics, in the whole commercial side of Man's social existence, money is the essential invention on which all the rest is based.

PRECIOUS METALS AND COINS

The example of a goat-money which has been taken is by no means fanciful. In primitive agricultural communities, domestic animals are the most obvious form of wealth and they frequently come to be used as money. But any animal has serious disadvantages as money. All goats are not alike ; if a man sells a piece of land for twenty goats, he may consider himself cheated when he receives the twenty skinniest and most diseased of the purchaser's flock. Moreover, goats have other disadvantages. An outbreak of disease may decimate a man's wealth. The breeding season will cause a plethora in the community's supply of money. Precautions have to be taken to see that one's money does not stray or fall victim to beasts of prey. Now just as domestic animals have certain grave disadvantages as money, so other commodities have outstanding advantages. It is a comparatively early discovery in the history of money that metals are among the most suitable of all commodities to serve as money. They are easily handled, their quantity is comparatively easily ascertained, they do not waste away, they need little storage space or attention. And since the annual production of a metal is only a small fraction of the total amount of the metal in existence, the available supply does not vary very much from year to year. And so in the next stage of civilization we frequently find metals serving as money.

Of all the metals, those known as the precious metals,

and particularly gold and silver, have become pre-eminently the money metals. Other metals have been used as money : iron, copper, bronze have each had their day. But in Western civilization at least, gold and silver have far outdistanced their rivals. It is worth making a short digression to investigate the connection between *precious* metals and money.

As soon as money was invented it became the object of men's desires. Since it would purchase anything, it became supremely worth having. What was really of value, what men really wanted, was the wealth that money would buy. The miser, the man who hoards money for its own sake and deprives himself of every good thing to acquire it, is rightly looked upon as an abnormal creature. But the perfectly normal man in the street does not entirely avoid the miser's mistake, for he also looks upon money as something that is valuable in itself. Every community, in selecting the commodity that is to serve it as money, nearly always chooses a valuable commodity. And, indeed, valuable commodities, as we shall see in a minute, have great advantages as money. But it is not their value which gives them their advantages, and an almost worthless commodity can serve perfectly efficiently as money, as we, who use bits of printed paper, ought to know.

The belief that since money is the key to all wealth it must consist of a substance that is itself valuable is very deep-rooted in human psychology. To this day the average man, if asked what makes money good money, would probably reply its value. Gold money, he thinks, being the most valuable money, is the best money. And if he were asked how it is that we accept worthless bits of paper, he would reply that they are backed by the gold in the Bank of England. The belief that money must either consist of, or at least be backed by, something

of value is sometimes carried to great lengths. For example, in 1923, when the great inflation in Germany had entirely destroyed the German people's faith in its money and there was an urgent demand for a 'good' money, the authorities produced a new currency, the Rentenmark, which was said to be 'backed by' the land of the country. It was true that a legal charge was placed on all the land of the country, but the Rentenmark note was not itself land, nor was there any method by which the holder of a Rentenmark note could possess himself of the land that was supposed to be behind his note. But the elaborate bluff worked, and so strong was the belief of the German people that any money which either consisted of, or represented, a valuable commodity was an efficient money, that the Rentenmark was accepted.

But this belief is fallacious. If it is the value of the money-substance which makes the money good, one would expect every community to use its most valuable substance as money. But in fact no community does so. The precious stones—for example, diamonds, rubies, pearls—have throughout their history been more valuable, weight for weight, than the precious metals. Even among the precious metals it is not necessarily the most valuable that is used as money. Gold has always been more valuable than silver. But silver has more often been used as money. Indeed, the French and several local dialects of English use the same word for 'money' and 'silver.' And if we inquire into the reason for this choice of the less valuable metal, we shall get the clue to the whole question. Gold was not used as money throughout the bulk of known history, although it was familiar and considered more valuable than silver, simply because it would have been inconvenient to use it as money. Indeed, it was *too* valuable. The amount of

gold needed to buy a loaf of bread would have been infinitesimal, and it is obviously inconvenient to have to deal in quantities of metal so small that they easily get lost. Only the very largest transactions could conveniently be settled in gold. Even in our own fathers' day, when gold was still the chief form of money, we had to have silver and bronze coins to accomplish the smaller transactions.

The reason why gold was too valuable to serve as money right through the Middle Ages was, of course, that it was too scarce. And so we arrive at the question which will occupy us for a large part of this book—the question of the proper *quantity* of money. We have just seen that money must not be too scarce, or else it will have to be handed round in inconveniently small quantities. It must also not be too common, or else it will have to be handed round in inconveniently large quantities. That is why iron failed to keep its place as money: nobody would be willing to carry several pounds of iron on his person to make his daily purchases. The money-substance must therefore be scarce, but not too scarce. And since metals are for other reasons convenient substances to serve as money, the most efficient money-substance will be a metal which is precious, but not too precious. Hence the choice of silver and, later, of gold, and the rejection of both platinum (which is too scarce) and iron (which is not scarce enough).

The point to notice is that it is the precise degree of *scarcity* which determines the choice of the money-substance and not its *value*. This may sound like a quibble, for are not scarce things valuable, and valuable things scarce? Throughout the greater part of monetary history the objection would be valid. But it is not to-day. For we have invented a money-substance, in the form of

paper money, which is scarce without being valuable. Laws against forgery prevent notes from becoming too common, but the paper on which they are printed is almost worthless. Their scarcity makes them an efficient form of money and their lack of value does not hinder them.

Mention of paper money, however, is an anticipation. We had got no further in our history of money than the choice of precious metals to serve as money and we must return to them. But the digression has served to establish the fact that there is no overruling reason why money should be made out of either a precious metal or of any other precious substance. Gold and silver were chosen simply because of their suitability for the job ; they are easily handled and stored, they do not deteriorate, they have just about the right degree of scarcity, and they can be relied upon neither to increase nor to diminish in quantity except gradually. But, in the earliest stages, precious metals still had two defects. In the first place, the ascertainment of their quality, though not a difficult process, was a troublesome one. The ordinary man did not want to have every piece of money that came into his hands assayed. And in the second place, metal is not the easiest thing to divide up into convenient units. If a man is buying a cow for two ounces of gold, it is inconvenient to have to cut the amount off the end of a bar. These difficulties were got over by the next invention in the history of money : that of coinage. The king of a country gradually undertook to issue lumps of the money metal of a standard weight and a standard degree of fineness, and he attested these lumps by stamping his image on them. That, quite simply, is the origin of the coin. So long as the public had confidence in the king's honesty and in his ability to prevent other people forging his likeness on coins of inadequate weight or inferior metal, his coins would be

accepted without question. But if doubts began to be cast upon either his integrity or the efficiency of his police, his coins were treated merely as lumps of metal like any other, subject to weighing and assay.

We have now arrived at the verge of historical times, and there were hardly any other developments in the technique of money until the modern age. There were, of course, incidents in the history of the coinage. The metals changed, and the denominations with them. The old names lost their meaning.[1] Debasements (*i.e.* the lowering of the metal content of the coin) were frequent, and the periods when coins could be taken absolutely on trust were rare. But throughout these long centuries money consisted, for all practical purposes, of coins.

One very interesting change was, however, in process beneath the surface. Gold and silver were originally chosen as money because they were, among other things, fairly scarce, and their scarcity made them valuable. When we say that a thing is scarce, we mean, of course, that it is scarce compared to the demand for it. Value is determined by the relations between Supply and Demand, and for a thing to be valuable it is not enough that there should be a comparatively large demand for it. Now gold and silver were valuable before they were chosen as money. That means that the demand for them, as ornaments and the like, was so large relatively to the amount of them in existence that they were scarce and valuable. And their scarcity and value played a part, as we have seen, in their selection as money.

The use of gold and silver as money very greatly

[1] Thus the English pound was, in origin, quite simply a pound of silver. But the connection between the pound as a unit of money and the value of a pound of silver has long since gone by the board. It is also interesting to note that the French franc stems from the livre, which was originally identical with the English pound. But to-day it takes 176¾ francs to equal one pound.

increased the demand for them. If large quantities of gold and silver were required for coining, there was correspondingly less available for ornament or for the various industrial and dental uses which were later discovered for the metals. At the present day, for example, about half the annual output of the gold mines is required for monetary purposes. And of the remaining half a large part is, in a normal year, taken by Eastern countries for the purpose of hoarding, which can almost be counted as a monetary use. The demand for gold in industry, dentistry, etc.—that is, the demand for it as a *metal*, and not as a monetary or valuable substance—is only a fraction of the total demand for gold. But the value of gold is still determined by the relations between Demand and Supply. If gold ceased to be used as money,[1] and the demand for it fell to the purely industrial demand, it would be very considerably less valuable. So we have the curious position that though gold was originally chosen as money because (among other reasons) it was valuable, it is now valuable because it is used as money. The truth of this can be shown by what has happened to silver. Seventy years ago silver was still largely used as money, and the value of an ounce of silver was still roughly that of one-sixteenth of an ounce of gold. But since that time, one nation after another has abandoned the use of silver for money (except for subsidiary coins, such as the English shilling, which are no longer of importance), with the result that the demand for silver has fallen off, and its value has declined until, by the outbreak of war in 1939, it took about 96 ounces of silver to equal in value a single ounce of gold.

[1] 'Used as money' does not only mean handed round as money by the general public. Gold is still used as money, although the ordinary man rarely sees any. This is fully explained in Chapter IX.

PAPER MONEY

After coinage, the next great development in the history of money is that of paper money. Indeed, it is in many ways the most important since the invention of money itself. It has, at least, more possibilities both for good and for evil than any of the intermediate discoveries. But paper money, with all its potentialities, did not by any means spring at one bound from a single fertile brain. On the contrary, it has had a gradual development, in which at least four distinct stages can be noticed.

Metal money, together with the advantage of being easily carried, suffers from the disadvantage of being easily stolen, and from quite early times merchants must have formed the habit of carrying with them on their travels not actual money, but merely written evidences of their command of money. These written documents (of which the traveller's cheque and the letter of credit are the lineal descendants) were not in themselves money—they could not themselves be used to pay for purchases—but they were, in a sense, temporary substitutes for money. If they were lost or stolen, little harm was done. The money itself was still intact, and could not be touched without the merchant's signature. These documents would naturally take the form of a certificate from some person or body of known repute in the merchant's home town (the embryonic banker) attesting that the merchant had deposited such-and-such a sum of money with him and undertaking to pay, out of that money, any properly authenticated claims of the merchant's creditors. This is Stage One. The document is not yet anything but a substitute for money.

In the course of time, however, these documents would naturally come to be used as money. If an

Englishman goes to spend a holiday in Switzerland, taking traveller's cheques with him, he should, in theory, visit the local bank to change his traveller's cheques into Swiss money before paying his hotel bill. But in practice he will find that the hotel is prepared to take the traveller's cheques themselves. If so, they are serving as money, and this present-day example will serve to illustrate how, quite early in the history of trade, the banker's promise to pay developed from being merely a claim on money to being money itself. It was also a natural development that the promissory document, instead of being made out in favour of a particular person for the precise sum he had deposited, should be made out to bearer (*i.e.* to whomever came into possession of it) for convenient round sums. Instead of being a certificate that John Smith had deposited £283 17s. 5d. and a promise to honour drafts on that deposit up to that amount, the document became merely a promise to pay £1, £5, £10, or £100 (or some other convenient sum) to whomever presented the document. The possessor was henceforth deemed to be the rightful owner. This, of course, is the fully-fledged banknote. Even our present banknotes bear upon their face the evidence of their origin. Every Bank of England note, for example, bears the legend, 'I Promise to pay the Bearer on Demand the sum of One Pound' (or Ten Shillings, or Five Pounds, as the case may be), signed, 'For the Govr. and Comp^{a}. of the Bank of England' by the Chief Cashier. This then is Stage Two in the development of paper money. The banknote has arrived, but it is still no more than a receipt for cash deposited. It is used as money, but it is hardly yet generally considered as money. Just as the Swiss hotel proprietor will accept traveller's cheques in payment of bills (thus treating them, in effect, as money), he still

regards them not so much as money but as claims upon money. When he receives a traveller's cheque from a customer, he will hasten to cash it for money at his bank.

As banknotes became more familiar, however, they came to be not merely used instead of money, but regarded as money. The banknote was not used for one transaction only and then immediately cashed, it began to be handed round from person to person and used to settle innumerable transactions. It was as if the Swiss hotel proprietor, instead of cashing the traveller's cheque at once, used it to pay his waiters' wages, and they used it to pay their wives' housekeeping expenses, and so on and so forth. Now this had a most important consequence for the banker who issued the notes. If they continued to circulate from hand to hand, it followed that they did not come back to him to be cashed. Some of the notes he issued would, of course, be presented for payment in hard cash (*i.e.* coin), but bankers found by experience that—once they had acquired the reputation for solvency, without which a bank cannot do business at all—only a small fraction of their notes ever came back to be cashed. If any did come back, the banker (always assuming a continuance of the public trust in him) found it possible to issue as many new notes. This made it possible for the banker to issue more notes than he had received deposits of hard cash. How and why he could do this will be more fully explained in the next chapter. Here we are merely concerned with the fact that banknotes can be issued in excess of the hard cash deposited in the banks, and not merely 'in excess of' the deposits of cash, but to many times the amount of the deposits. For example, let us suppose that bankers have found, by experience, that they will only be asked to cash one note of every twenty

they have in circulation at any time. This means that they need to keep a reserve of cash equal to 5 per cent. of the total of notes outstanding. A prudent banker would probably double this reserve, so as to be on the safe side. But even then, he only needs £10 in cash in his till for every £100 in notes outstanding. In other words, when he receives £10 extra in cash from any source, he can issue £100 more in notes.

This is Stage Three in the development of paper money. And it is immediately apparent that it is a considerable step forward. Hitherto, in Stages One and Two, the banknote has been either not money at all or merely a convenient paper substitute for metal coin. Even in Stage Two, for every pound of notes outstanding, there is a pound of metal coin immobilized in some bank's vaults. The existence of banknotes makes no addition to the total amount of money in existence. But with Stage Three, banknotes emerge from the position of being mere substitutes for money. They constitute a very real and very large addition to the total supply of money.

The seventeenth and eighteenth centuries were the period when the banknote emerged from its chrysalis stage. At the beginning, as with most innovations, the invention of the banknote was both abused by its inventors and unpopular with the public. The man in the street thought that if the banker could, as he claimed, 'create' banknotes, which served as money, out of thin air, then he was both a dangerous and a dishonest person. (We shall have to discuss both questions, whether the issue of banknotes can really be called 'creation of money' and whether it is an honest and proper proceeding, in the next chapter.) Some of the earliest banks were compelled to close their doors when it became known that they had issued notes in excess of

their cash resources; the holders of their notes were not sure whether the banks were honest, but they felt quite certain that they were not solvent, and accordingly rushed to cash their notes. Even where public distrust did not show itself so violently, bankers were frequently intoxicated by their strange new power; they issued notes not merely in excess of their cash reserves, but in excess of the prudent multiple of their cash reserves. They were thus unable to cash even that fraction of their notes which was presented for redemption. And, of course, if a bank fails to redeem on demand the promise printed on even a single one of its notes, all of them will be presented for redemption by their frightened holders. The great majority of a bank's notes will *not* be presented for redemption only so long as the bank cashes promptly and without hesitation the minority that *are* presented. Frequent bank crashes—and such ventures as that of John Law in France in the early eighteenth century, when great schemes of fantastic nature were wholly financed by the issue of notes in almost unlimited quantities—brought the banknote into considerable disrepute, and the state had to step in to regulate the position. Even without the abuse of the system the state could hardly remain indifferent in the face of an invention which threatened not merely to multiply the supply of money available to the public, but to make it subject to violent change. There was hardly such a thing, two hundred years ago, as a theory of money, but the statesmen of those days had no need of a theoretical equipment to realize that uncontrolled issues of banknotes threatened the whole economic structure of the state. The exact form of the regulation differed from time to time and from place to place. But in general, issues of notes were usually severely limited by reference either to the bank's capital (*i.e.* the cash

paid into it by its proprietors) or to its deposits of coin (*i.e.* the cash paid into it by its customers) or to both. The issue of notes in excess of cash-in-hand was not entirely prohibited, but it was very severely restricted.

In England, from the start, the Bank of England had been given a privileged position, and it is nearly two centuries now since it was first given a partial monopoly of note-issue. Gradually that partial monopoly has grown more and more complete, until to-day, although other banks still issue notes in Scotland, Ireland, and the Isle of Man, the Bank of England alone has the legal right of note-issue in England and Wales. This is not the only privilege that the Bank of England note enjoys, for since 1833 it has been 'legal tender,' that is to say, recognized by the law as full discharge of a debt. Not only is it customarily used as money, it is declared by the law to be money.

When the banknote had evolved as far as the Bank of England note, it had clearly left far behind its original status as a mere claim to, or substitute for, metal coins. Nevertheless, the circumstances of its origin still clung to it. The banknote was not considered to be a safe or 'sound' form of money unless it could be converted on demand into gold coin. It is true that the convertibility of Bank of England notes had been suspended during the Napoleonic Wars between 1797 and 1819. But this period of the suspension of convertibility was regarded as a temporary and unwelcome by-product of war. It was associated with unsound financial practices and economic chaos. It was the exception, which proved the rule that a paper currency, to be reliable, must at all times be convertible into gold. When war came again in 1914, convertibility was once more suspended. But still deference was shown to the theory of con-

vertibility, for the law compelling the Bank of England to convert its notes into gold on demand was retained on the statute book. But both the export and the melting of gold were prohibited, so that there was no point in attempting to convert notes into gold, since you could do nothing with the gold when you had it. In 1925 convertibility was once more restored. But the age-long distrust of paper money was beginning to disappear. For under the new Act the Bank of England was no longer under the compulsion of converting every single £1 note presented to it into a gold sovereign. You could still get gold for your notes, but only if you were prepared to take at least one bar of gold, at about £1,700 a bar. The man in the street could no longer get gold for his notes. And he did not care in the slightest.

The truth at long last was coming out. The early banknotes were trusted only because they could be converted into gold. But after two centuries of Bank of England notes the public had come to accept them for their own sake. The ordinary man was perfectly content with Bank of England notes, because he knew that they would perform every service that he required his money to perform. This had been true at least since 1833, when notes were made legal tender, and in fact for even longer, but it had taken a century for the law to recognize the true state of affairs. In 1931, when the gold standard was once again suspended, the change was completed, for since then Bank of England notes have been wholly inconvertible. The 'Promise to Pay' which appears on their face is now utterly meaningless. Not even in amounts of £1,700 can notes now be converted into gold. The note is no more than a piece of paper, of no intrinsic value whatever, and if it were presented for redemption, the Bank of England could honour its 'Promise to Pay

One Pound' only by giving silver coins[1] or another note. But it is accepted as money throughout the British Isles. This is Stage Four, the final stage, in the evolution of the banknote. And with its attainment the gold coin, which, together with its silver consort, seemed the only possible or conceivable form of money, has disappeared. The reign of the precious metals was so long that they had almost acquired a Divine Right. But it was over at last, and there is hardly a country in the world where metal coins now circulate, except in the form of token coins, mere rank-and-file assistants to the dominant paper.

There was, it is true, a little more reason in the general belief in the necessity for retaining the obligation of conversion into gold than has been implied above. Nearly every experience of inconvertible banknotes known to monetary history has been associated with monetary instability. So long as the obligation to convert remains it imposes a severe restraint upon the note-issuing authority. When it is removed, the temptation to issue excessive quantities of notes is very strong, and it is hardly surprising that inconvertibility has nearly always been synonymous with excessive issues. But it is the excessive issues and not the inconvertibility that have caused the trouble. The way to avoid the harmful results which follow is not to insist upon con-

[1] Our present silver and copper coins should not be confused with the gold and silver coins of which we have been speaking earlier in this chapter. The gold in a pre-war sovereign was worth precisely £1, and throughout history coins have in the great majority of cases been valued according to their metallic content. But the silver in a present-day shilling is worth very much less than 1s. The coin derives value not from the silver in it but from the implied undertaking of the State to accept twenty shillings for a pound. The shilling is, in fact, a note printed on metal for the sake of convenience. Coins of this sort are usually called token coins.

vertibility, but to make some other arrangement for limiting the number of notes issued. When this is done, an inconvertible paper currency is a perfectly satisfactory form of money, as is shown by the experience of Great Britain since 1931. But this is a large subject, with more ramifications than it is appropriate to go into now. It will be fully discussed in Chapter IX.

One more form of money in use in the modern world remains to be described. This is the form of money that is handed round from person to person by means of cheques. At first sight, it appears to be very different from any other form of money, but in its fundamental principles it is merely a variant of the banknote. It will be remembered that one of the conveniences of the earliest form of monetary paper—what we have called Stage One—was that it was not itself money, but merely a claim to money, and could therefore be carried about without risk of loss or theft. But as soon as the banknote became money in its own right this convenience disappeared. If to-day you lose a Bank of England note, you are poorer in just the same way as if you had lost a gold coin.

The invention of the cheque gets round this difficulty. The banknote, it should be remembered, is no more than an evidence of a debt owed by the issuing bank. It is an IOU, with the name of the creditor left blank. Because the public is confident that the promise *would* be honoured, the note circulates as money. What is handed round is the evidence of a bank's indebtedness; when Smith gives Jones a £1 note, the Bank of England's debt of £1 to Smith is transferred to Jones. A cheque performs precisely the same function. Smith may have a deposit of £1 at the bank. That means that the bank, being in debt to Smith for £1, instead of giving him a transferable printed IOU for the amount, merely

credits him with £1 on its books. If now Smith draws a cheque for £1 in favour of Jones, he is, in effect, instructing the bank to transfer its debt from himself to Jones, and the £1 will, in fact, be transferred from Smith's account to Jones', either at the same bank or some other. What has happened is precisely the same as when a banknote is handed over. The bank's indebtedness has been transferred from one person to another. It is true that a cheque is different from a banknote: it specifies both parties to the immediate transaction as well as the ultimate debtor, the bank; it is made out for a precise sum; and, most important, it usually expires with a single transaction. But the cheque is not the money that settles the transaction; it is merely the means of transferring the real money, which is the deposit in the bank, *i.e.* the acknowledged debt of the bank. If there is no deposit behind the cheque, it will not be honoured, and tradesmen frequently hesitate to accept cheques because they do not know whether they are 'good' or 'bad.' But nobody would refuse to accept the transfer of a bank deposit. It is the deposit which deserves the name of 'money.' The only difference between banknotes and bank deposits is that in the one case the indebtedness of the bank is embodied in the form of a piece of paper and is transferred by the act of handing the piece of paper over, and in the other case the indebtedness is merely recorded on the books of the bank and transferred by a written order signed by the creditor. In both cases it is the transfer of the bank's debt that accomplishes the transaction. Both methods have their conveniences, and in the modern world we use both together.

Pure convenience might have been enough to give birth to the cheque. But in England it was also helped by the limitation on the issue of banknotes. After the

Bank Act of 1844, note-issues, whether by the Bank of England or by other banks, were very severely limited. But the community, which was growing both in size and in wealth, had need of an ever-increasing supply of money. Moreover, the banks, for reasons which will be apparent in the next chapter, find it a highly profitable business to have their IOU's circulate as money, and when they were limited in their issue of IOU's in the formal printed shape of notes they naturally turned to the alternative method of cheques and deposits. Cheques, or something very similar, were known as early as the second half of the seventeenth century, but the great expansion of their use dates from the Bank Act of 1844 and similar enactments limiting the issue of notes. This view is reinforced by the fact that, except in the United States, where circumstances were very similar, and in the British Dominions, which take their monetary customs from Great Britain, cheques are still very little used in foreign countries.

In Great Britain, however, cheques are now by far the most frequently used method of transferring money. The total of bank deposits is five times as large as the total of banknotes in circulation, and many times larger than the total of all other forms of money. Deposits, however, are still only in Stage Three of their development. They are not legal tender, and any creditor is entitled to refuse payment if it is tendered in the form of the transfer of a bank deposit. Nor are bank deposits inconvertible. The Bank of England can refuse to redeem the promise that is printed on its notes. Its Promise to Pay is not exactly withdrawn, but it has become a debt which, like British Government Consols, never matures. The other banks, however, are still under the obligation to redeem their deposit-debts, if called upon to do so, in some form of legal tender

money.[1] If, sometime in the future, the existing banks are nationalized and turned into one organization owned by the State, their deposits may become both legal tender and inconvertible. There is no reason why they should not thus progress to Stage Four of their development.

WHAT IS MONEY?

We have now described money, with some elaboration of history and theory. But we have not yet defined it. What, after all this discussion, is money?

To answer the question we must recall the three functions of money with which we started. Money must serve as a measure of value, as a medium of exchange, and as a store of wealth. Of these three functions the second is the most essential. Other things may serve as measures of value or as stores of wealth. Thus the values of many articles in Great Britain are measured in guineas, but there has long since ceased to be any coin, or indeed any form of money, answering to the name of guinea. Stock Exchange securities are an obvious way of storing wealth, but you cannot buy a single box of matches with stock or a share. Neither guineas nor Consols are money. Money must be something which performs all three functions, and pre-eminently the function of being a medium of exchange. For the purposes of this book—and, indeed, for most purposes—money can be defined as *anything* that is *generally acceptable* as a means of exchange (*i.e.* as a means of settling debts) and at the same time acts as a measure and as a store of value.

The significant words in this definition are those in italics. To be money a thing must be generally

[1] *There is, for all practical purposes, only one form of legal tender* money in Great Britain—to wit, Bank of England notes.

acceptable. Many things are acceptable for particular purposes. Thus gift coupons are accepted in payment for a large variety of goods. But they are not *generally* acceptable in payment for *anything* ; accordingly, they are not money.

And, secondly, *anything* that is generally acceptable is money. This definition would not be satisfactory to all writers on the subject. Some of them, particularly those with a legal bent of mind, have tried to limit the definition of money to things that have been legally recognized as money. But this is an awkward distinction, because bank deposits (which are not legally recognized as money) are used in the same way and have precisely the same economic effect as banknotes (which are legally recognized as money). Whatever the lawyer may think, the economist has no option but to treat as money everything that is generally acceptable in payment of debts. When the distinction is necessary, the legally recognized banknote can be called *currency* ; the legally ignored deposit can be called *bank-money*. But both are money. And so would be anything else that was generally accepted and could be used, not merely once in a way to buy particular goods, but always and for goods and services as varied as tea, tram-rides, tacks, and tri-nitrotoluene.

The only essential requirement is general acceptability. Money, as we have seen, need not itself be valuable. It must, indeed, be relatively scarce, since it would hardly do if money could be plucked off every tree. But provided precautions are taken to keep it relatively scarce—and, it may be added, comparatively invariable in amount—money can consist of things as worthless as a scrap of paper or the scratch of a clerk's pen in the books of a bank.

Chapter II

THE BANKS

THE NATURE OF A BANK

SOMETHING has already been said about the banks in the previous chapter. Indeed, it would be impossible to describe the nature of money in the modern world without bringing in the banks, since so high a proportion of the money now in use consists of their I O U's. But we must now go back and examine more closely these institutions which have gradually displaced the mints as the providers of the community's money and the axis of its monetary system. Having, in the first chapter of our story, introduced the hero (or villain—the gradual unfolding of the plot will show which) and described one or two of his actions, we must now give his genealogy and a brief outline of his character.

The present-day banker has three ancestors of particular note. One we have already met: the merchant, whose high and widespread reputation, or credit, enables him to issue documents which will be taken all over the known world as titles to money. To this day the title of 'merchant banker' is reserved by usage to the older, cosmopolitan and more exclusive private banking firms, nearly every one of which can trace its ancestry back to a trader in commodities more tangible (though hardly more profitable) than money.

The banker's two other ancestors are the money-

lender and the goldsmith. Lending and borrowing are almost as old as money itself, and the village money-lender is found even in quite primitive communities. He is not usually regarded as a very lovely object ; usurer is one of the very oldest terms of abuse. But the services he performs are undoubtedly useful and necessary, even though the reward he exacts in return may usually be rapacious. Even if incomes were equal, there would still be some individuals with an excess of money and others with a shortage. And since incomes never have been equal, the need for some means of transferring capital from one individual to another is increased. The money-lender works, of course, with his own capital. But if there are any other members of the community with money to spare, it will be quite natural for them to entrust it to the money-lender for investment, in view of his skill and experience in the technique of exaction. As soon as the money-lender reaches this stage, he is an embryonic banker. He has become a money-borrower as well as a money-lender. At first, he may merely lend out his clients' money on commission, just as a present-day solicitor does. But it is obviously both more convenient for his clients and more profitable for him to borrow their money outright, paying interest on it and mingling it with his own capital, and then to lend out the whole lot, making his profit from the difference between the moderate rate of interest he pays to his lending clients and the high rate he charges to his borrowing clients.

Throughout the Middle Ages, the Church was very much exercised about the ethics of interest. Generally speaking, usury was condemned, but usury was not always taken to include the payment of moderate interest on loans. And in any case, disapproval by the Canon Law did not prevent the charging, or the payment, of

rates of interest which were truly enormous. Even to-day almost every state finds it necessary to have laws prescribing maximum rates of interest for petty money-lenders. Whether *any* rate of interest is morally justifiable or economically expedient is an interesting question which does not concern us in this book.

Every bank has a very great deal of the money-lender in its composition. It collects money from those who have it to spare or who are saving it out of their income, and it lends this money out to those who require it. This is a valuable and necessary function in any community. Indeed, as we shall see later in this book, it is a function of the most peculiarly vital importance if a complex modern economy is to work properly. Many institutions which call themselves banks perform no other function than this. A savings bank, for example, performs precisely this function, except that its funds are usually used to buy investments instead of making loans direct to individuals. A mortgage bank (what is known in Great Britain as a building society) is more exactly analogous, as its function consists entirely in collecting individual savings and lending them out to other individuals who wish to borrow for the purpose of building or purchasing a house. Even the large institutions which come most readily to mind when the word 'bank' is mentioned—the opulent institutions whose branches stand on every street-corner—spend a great deal of their time and energy in this business of collecting and disbursing savings.

If this were their only function, however, the chapter could stop here. But it is not. We have hitherto been talking of people who have money *to spare*—that is, money which they do not wish to keep on hand for the ordinary expenses of life and which might as well, therefore, be put out where it can earn some interest. But in

the present age the banks are concerned with far more than that. The ordinary bank depositor keeps all his money in the bank and makes his daily payments out of it. Moreover, the banks are not content with merely collecting other people's money and lending it out again. As we have seen in the last chapter, they play their part in 'creating' or 'manufacturing' the community's supply of money. A clear line can therefore be drawn between the bank (in the ordinary sense of the term) and those institutions which, whether they call themselves banks or not, are merely the present-day descendants of the money-lender. The I O U's of a savings bank or a building society do not circulate as money; those of a bank do. That is the vital distinction. Money, it has been said, has two properties. It is flat so that it can be piled up. But it is also round so that it can circulate. The progeny of the money-lender are concerned with flat money, piled-up money, savings. The progeny of the goldsmith are concerned with round money, circulating money, cash. The big modern banks perform both functions. We have already traced their descent on one side from the money-lender; we must now turn to their other ancestor, the goldsmith.

The goldsmith-ancestry of the modern bank is purely an English affair. Indeed, the bank as a provider of circulating money is almost entirely an English invention, which has not yet spread to every part of the civilized world. Part of every goldsmith's necessary stock-in-trade is a secure safe. Without it he could hardly stay in business. And a goldsmith, even to-day, will frequently oblige his customers by keeping their gold and silver plate in his safe. In a period when money consisted entirely of gold and silver, and forms of investment (except in land) were almost non-existent, private persons owned proportionately much more gold and silver than

they do at present. What more natural than to entrust it to the goldsmiths for safekeeping and to get a receipt? In London, the merchants of the City for many years kept their gold in the Tower of London. But when King Charles I., hard-pressed for money, seized the merchants' gold in the Tower in 1640, the goldsmiths naturally got the business to themselves. In the beginning this was pure safe-deposit business, and the deposit receipts were used only for the purpose of withdrawing the gold. But the stages of development into the full-blown bank were rapid and easy. First, the deposit-receipts began to be handed round as money. It was certainly more convenient to pay debts by handing over a slip of paper than to withdraw gold, hand it over, and then re-deposit it. So the deposit-receipt, once the goldsmith's name and reputation became well known, became the embryonic banknote. Second, even the deposit-receipt could be dispensed with. The goldsmith could merely be instructed by letter to transfer the ownership of such-and-such an amount of gold from the original depositor to his creditor. This is the birth of the cheque (the earliest cheque on a London goldsmith-banker which has been preserved to posterity is dated 1675). And finally, the goldsmith, now fully developed into banker, makes the discovery that he can safely issue deposit-receipts in excess of his gold stock. It is immaterial whether he does this by printing off more receipts and lending them to persons in need of accommodation (or indeed using them to pay his own household bills), or whether he does it by allowing his customers larger 'deposits' (on which they can draw by cheque) than the value of the gold they have deposited. In either case the crucial step has been taken. The principle of 'creation' of money has been discovered. At first, the goldsmith was doubtless cautious in his

'creation.' Then later, with growing confidence, he went too far. But gradually he accumulated experience about the proper proportion of actual gold to keep in reserve.

The present-day banker shows traces of each of his three ancestors. Like the merchant, he still makes a speciality of financing foreign trade, and has special methods, such as the issue of bills of exchange (which we shall shortly have to describe), for doing so. Like the money-lender he still collects the savings of one set of persons and lends them to another set. A large part of his deposits consist of so-called 'deposit accounts' or 'savings deposits' which cannot be drawn upon by cheque and can only be withdrawn by giving notice. These deposits are clearly not 'circulating money'; they are 'flat money' entrusted by its owners to the money-lender for placing. Both of these functions are important in their way. But the unique function of the banker, and the one which makes him important for this book, is the third, the provision of a convenient mechanism by which people can make payments to each other without having to walk round to each other's houses with bags of coin. And in providing this mechanism he also provides, or 'creates,' the money itself. He has discovered the secret, for which the mediæval alchemists strove, of manufacturing money. So at least it seems, though we must now examine more closely this apparently miraculous business of 'creation.'

THE 'CREATION' OF MONEY

Let us suppose that the ordinary borrower goes to his bank for a loan of £100. He convinces the banker

that he will be able to pay the interest and repay the principal and that the loan would be safe in his hands —and he gets the loan. What precisely happens next? The banker does not go to his safe and draw out £100 in gold and hand it over to the borrower. If the banker is permitted by the laws of his State to issue notes, he may make the loan by handing over 100 of his £1 notes straight from the printing press. But the most usual method of making a loan is merely to credit the account of the borrower with £100. The borrower may draw some of the £100 out in cash (for example, to pay wages), but he is more likely to spend it by cheque, in which case the £100 is withdrawn from his account but credited to somebody else's. The point to notice is that the loan is made by increasing the banker's debts (this is true whether the loan is taken in the form of notes or of a deposit). The banker has in return the borrower's promise to repay the loan, and he will also receive interest; but the granting of the loan has increased his debts. In the words of the old banking maxim, 'every loan creates a deposit.' The banker's debts (whether notes or deposits) serve, as we have seen, as money. As a result of the loan, therefore, an additional £100 of money has come into existence. When the loan is repaid, the borrower's account will be debited with £100, and the cancellation of the loan will thus remove £100 of money out of existence.

Making loans is not the only way in which deposits can be 'created.' If a banker buys £100 of securities on the Stock Exchange and pays for them by crediting the seller's account with £100, he has increased his deposits—which are money—by £100. It does not even matter whether the seller of the securities is a customer of the purchasing bank or not. For he will deposit the

cheque he receives in payment for the securities in one of the banks. The purchase of £100 of securities by any banker increases the deposits either of his own bank or of some other bank—in any case, the deposits of the banks as a whole—by £100. What is true of the purchase of securities is true of the acquisition of any asset. A bank can buy itself a new building by giving the builder bank deposits in payment. A bank, indeed, is in the happy position of being able to acquire anything it wants merely by giving its I O U in exchange. It can do this because its I O U's are regarded as money and are rarely pressed for payment. Just as any one can 'create' his own I O U's, so the banker can 'create' money and use it to buy what he wants.

But it must never be forgotten that the money the banker 'creates' is his liability. The whole system turns upon the fact that very few of the banker's I O U's will be pressed for payment. But some of them *will* be. The community requires a certain amount of hard cash and will draw upon the banks for it. In addition, deposits are continually moving from one bank to another. Every day customers of the Midland Bank are drawing cheques in favour of customers of Lloyds Bank, while customers of Lloyds Bank are drawing cheques in favour of customers of the Midland Bank. All these cheques pass through the Clearing House, where they are set off against each other. But there will be every day a small net balance owing by one bank to the other, and the debtor bank must be prepared to settle this debt. Thus the banks have to meet claims from two sources: from the public wanting actual currency for its day-to-day purchases; and from their fellow-banks in settlement of clearing house balances. But these payments form only a tiny proportion of the total monetary transactions of the community, and experience

has shown that only a small proportion of a bank's total deposits need to be kept in cash for these two purposes. The banks keep more than they need in order to make doubly sure, but even then their cash only amounts in England to 10 per cent. or 11 per cent. of their total deposits.

But the need for keeping a cash reserve, however small it may be, imposes a restriction upon the power of the bank to 'create' money *ad lib*. 'Creating' money involves an increase in the bank's deposit liabilities, and the bank cannot afford to let its cash reserve fall below 10 per cent. of its total deposit liabilities. It might, indeed, be safe to let the cash ratio fall to 8 or even 6 per cent. But the public has grown so accustomed to the existing ratio that it would begin to look askance at a bank which allowed its cash ratio to fall below the usual figure. Unlike other people, a banker not only cannot do things which endanger his position, he cannot even do things which people might *think* would endanger his position. His whole business depends upon the confidence of the public in his ability to meet his liabilities on demand. If his reserves are enormous, nobody will question his ability to pay on demand. But if they are falling below the figure to which the public is accustomed, nervous depositors will begin to wonder whether the banker could after all meet all his liabilities, and they will begin to draw their deposits out in cash, just to be sure. There are many paradoxes in the banking business. No banker could pay all his liabilities in cash on demand, if they were all to be presented at once. In that sense, every banker is always insolvent. But the banker's whole business depends absolutely upon his reputation for solvency, upon the public's belief in his ability to pay every demand upon him in cash, without question or hesitation. The bigger his cash

reserves, the less he will need them. The less cash he has, the more he will need.

Any prudent banker, then, will make it an unbreakable rule of his business never to let his cash fall below a certain proportion of his deposit liabilities. In some countries the law is not content to leave it to the banker's prudence, but minimum reserve ratios are prescribed. Thus in the United States every member bank of the Federal Reserve system is compelled by law to keep reserves equal to at least 3 per cent. of its ' time deposits ' (*i.e.* those against which cheques cannot be drawn and which can only be withdrawn after one month's notice), and from 7 per cent. to 13 per cent., varying with the location of the bank, of its other deposits. Moreover, these legal minimum reserve ratios can be increased by the Federal Reserve Board, if it thinks fit. They were actually doubled in 1936 and have since been only slightly reduced.

Banks, then, can only ' create ' money up to the total of about ten times their cash reserves. We shall proceed in a later section of this chapter to define what ' cash ' in this sense is. It is enough for our present purpose to say what it is not. A bank's ' cash ' is not any form of money that the bank itself can create or expand at will. A bank's ' cash ' must be some form of money with which the bank can pay its debts if called upon to do so. But the deposit-money which the bank ' creates ' cannot serve to pay its debts, for these deposits *are* the bank's debts. The amount of cash which a bank has at its disposal (or, more accurately, the amount of cash which all the banks have at their combined disposal) is beyond the bank's power to determine. The bank's power of ' creating ' money is thus limited by the cash it can get its hands on. £1 of cash gained makes possible £9 or £10 additional ' creation ' of money. But if £1 of cash is lost,

£9 or £10 of deposits must be destroyed. This is the first limitation on the bank's power of 'creating' money.

The second limitation arises out of the nature of the process by which the deposits come into existence. As we have seen, deposits arise out of the acquisition of some asset or other—either a loan owed the bank by a borrower, or a security, or a building, or some other form of asset. Now every asset is a form of wealth. This can be seen easily in the case of stocks and shares or buildings. Nearly every loan made by a bank is secured upon some form of valuable security. Even if it is granted without security, the earning capacity of the borrower is a form of wealth. Thus the bank does not 'create' money out of thin air; it transmutes other forms of wealth into money. Even the mediæval alchemists never hoped to make gold out of nothing; their highest hope was to transform lead into gold. The banker's power is not even so great as this, for he cannot change a worthless substance into a valuable one. But he can turn immobile wealth into the mobile (or 'liquid') form of wealth known as money. He takes the immobile wealth as his asset and gives his IOU (which is money) in exchange. This is the very essence of the banker's business.

The confidence of the public in the soundness of the bank invests the bank's promises to pay with the qualities of money. That is to say, the public uses these promises to make its purchases and to pay its debts. But it should be clearly understood that they are not money in this sense to the bank. To the public a banknote is the representation of an asset; to the bank it is the representation of a liability. When a bank increases its notes or deposits, it increases its liabilities, and it is only right that it should be compensated for doing so. Misconception of this fact is at the bottom of much loose

thinking about the nature of the banking system. It is true that the higher the deposits or notes of a bank the higher are its profits. Banks are therefore always anxious to increase their liabilities. However, the bank makes its profit, not out of its liabilities, but out of the assets it has acquired in exchange for its liabilities. When it makes a loan it does so, as we have seen, by increasing the number of its promises to pay. But it makes its profits out of the borrower's promises to pay, not out of its own. The two things originate in the same transaction, but they are quite separate. If the asset disappears (*e.g.* if the borrower becomes bankrupt) the liability on the notes or deposits remains. If the liability disappears (*e.g.* if the notes are destroyed) the asset remains. An amusing instance of the lengths to which confusion can go is provided by the action of an eighteenth-century Irish crowd which made a bonfire of an unpopular banker's notes, hoping thereby to force him into failure.

'Creation' is thus hardly an exact description of the method by which bank-money comes into existence, and it should never be used without the qualifications that have been discussed being borne in mind. Before a bank can 'create' fresh money, it must have cash equal to at least 10 per cent. of the contemplated 'creation.' Even then the money cannot come into existence without being used to acquire some real wealth for the bank, or without increasing the bank's liabilities which are payable in cash or on demand. But even when these qualifications are fully allowed, the banks' power still remains an enormous one. There are limits to their actions, but within those limits the banks retain a very large power to determine both the quantity of money in existence and the persons into whose hands it shall be placed.

Individual bankers will complain that, even when thus qualified, their powers have been exaggerated. Let us suppose that in any one country there are five banks. Banker A comes into possession of £10 extra of cash. Let us suppose that, having read this chapter up to the present point, he proceeds to make loans until his deposits have increased by £100. So far, so good. But the persons who have borrowed the money will proceed to pay it away and, since there are five banks, the odds are that four out of five of the persons to whom they pay the money away deposit it in Banks B, C, D, and E. These four banks will thus have claims against Bank A for £80 and, as a result of 'creating' £100, Bank A will lose not only the £10 extra cash he started with, but £70 of cash as well. Accordingly, says your practical banker, this talk of 'creation' is nonsense. If a bank has £10 extra cash it can lend £10 extra, neither more nor less. Banks, say the bankers, do not create money; they only lend the money their depositors entrust to them.

There are two answers to this: one theoretical, one practical. The theoretical answer is that the practical banker has not carried his analysis far enough. He stops at the point where Banks B, C, D, and E are getting £20 apiece in cash from Bank A. This will enable *them* to start 'creating' money by making loans. Some of their 'created' money will come back to Bank A, who will thus get some of his cash back. But if his original £10 extra of cash had come from somewhere outside the banking system (*e.g.* gold mined in South Africa) it must be swelling the cash reserve of *some* bank, and until £100 of new deposits have been created somewhere, the cash reserve ratios of all five banks on the average will be in excess of their usual figure. The expansion of deposits and the handing backwards and

forwards of cash *must* continue until the extra £100 has been 'created.'

The second answer is severely practical. The total deposits of the British banks at the time this book is written are about £2,400 millions. But the total amount of cash (*i.e.* money other than bank deposits) in the country has never greatly exceeded £600 millions, and there has never been a time when all, or even nearly all, the cash in the country has been deposited in the banks. The banks, in fact, have never had much more than £250 millions of cash. If the banks do not 'create' their deposits, where can the other £2,150 millions have come from? It is possible to take the figures, either of one bank or of all the banks combined, and observe how the fluctuations in the cash item are almost exactly matched by fluctuations, nine or ten times as large, in the deposit item. To anybody who analyses the matter, either theoretically or practically, beyond the first stage there cannot be any doubt that the banks 'create' their deposits. The only practical limit is set by the amount of cash available.

THE BALANCE SHEET

We have discovered in this discussion two cardinal principles of banking. One of them is the principle of ratios, which we have encountered in the form of the minimum ratio of cash to deposits permitted by law or custom. The other principle is the equality of assets and liabilities. In a sense, this latter principle is not peculiar to banking. Every balance-sheet balances, whether it be the balance-sheet of the Midland Bank or that of a slate club. But a bank's business is, in a very special sense, a balancing of assets and liabilities. A bank acquires assets by increasing its liabilities, not

indirectly as a result of trading, as any other business does, but directly. The bank's assets are directly exchanged for its liabilities. If you wanted to examine the business of a steel company, the first thing you would want to know would be how much steel it made, and the second would be the condition of its furnaces and rolling mills. The balance-sheet would come later. But with a bank, which is a dealer in debts and credits, the first thing you want to know is the amount of its debts and credits. The whole business of a bank is in its balance-sheet. The balance-sheet also has the merit of demonstrating at a glance the ratios to which the bank is working. To carry our discussion of the banks further, we must therefore examine their balance-sheets. Below and on page 52 are printed two sample balance-sheets. One is the combined balance-sheet of the eleven members of the London clearing house in May 1939. The other is the combined balance-sheet of all the member banks of the American Federal Reserve system on June 30, 1939. Both of these balance-sheets are printed in a somewhat simplified form.

Monthly Statement of London Clearing Banks, May 1939

LIABILITIES		ASSETS	
Capital and Reserves	£138,784 000	Coin, Bank Notes, and balances with the Bank of England	£236,133,000
Deposits	2,166,793,000	Cheques in course of collection, etc.	65,796,000
Notes in circulation	1,414,000	Money at call and short notice	143,476,000
Other items	300,000	Bills discounted	200,722,000
		Investments	604,538,000
		Advances	987,972,000
		Other items	68,654,000
	£2,307,291,000		£2,307,291,000

Member Banks of the Federal Reserve System, June 30, 1939

LIABILITIES		ASSETS	
Capital and reserves	$5,496,000,000	Cash in vault	$712,000,000
Deposits	43,690,000,000	Reserves in the Federal Reserve Banks	10,011,000,000
Borrowings from the Federal Reserve Banks	5,000,000	Balances in other banks	4,674,000,000
		Investments	19,462,000,000
		Advances	13,141,000,000
		Other items	1,191,000,000
	$49,191,000,000		$49,191,000,000

The liabilities side of the balance-sheet is comparatively simple. It consists, in the first place, of the banks' liabilities to their shareholders—the capital originally paid in and any accumulations of undistributed profits. The largest liability item is liability to the public, represented by notes (if any) and deposits. This is the item which represents the bulk of the money supply of the country. In the United States the third item is 'Borrowings from the Federal Reserve Banks.' The nature of the Federal Reserve Banks will be discussed in a page or two; for the present this item can be regarded as the banks' liability for cash that they have temporarily borrowed. And finally, there is an item of miscellaneous liabilities, incurred by the banks in the course of their business, which need not, for our present purposes, be defined in any greater detail.

The assets side of the balance-sheet is both more complicated and more interesting. In distributing its resources among the different types of asset open to it, the bank has to bear two considerations in mind. First of all, it must be able to meet any claims upon it in cash

on demand. For this purpose it keeps, as we have seen, a certain reserve of cash. In addition, to make itself more secure, it lends out another part of its resources on very short loans, some of them repayable on a day's notice. The ordinary manufacturer or merchant has no use for loans which he may be called upon to repay at twenty-four hours' notice, but they are very acceptable to the different varieties of traders who compose the Money Market.

The second consideration which the banker must bear in mind is income. He must arrange his assets in such a way that the return on them is sufficient to pay the wages of his staff, pay interest on his borrowings, accumulate reserves, and leave a little over for dividends for the shareholders. Now on his cash reserve the banker clearly earns nothing at all. Moreover, short-term loans, in view of their very considerably smaller convenience to the borrower, carry only very low rates of interest. So the remainder of the bank's funds has to be laid out in such a way as to yield a good return. But, broadly speaking, the better the return, the less possible it is to get your money back quickly. The banker can never afford to forget that he has liabilities against every one of his assets, and he must not, therefore, place them where they cannot be liquidated. That at least is the ideal. In practice it cannot be attained. Some of a bank's assets might take years to realize. But, in his own defence, the banker keeps up the form of making only temporary loans, even though, in fact, a great many loans are renewed whenever they mature.

Liquidity and profitability, therefore, are opposing considerations. Cash has perfect liquidity, but yields no return at all. At the other end are some loans which yield a high rate of interest, but are hardly liquid at all. The secret of successful banking is to distribute resources

between the various forms of assets in such a way as to get a *sound balance between liquidity and profitability*, so that there is cash (on hand or quickly realizable) to meet every claim, and at the same time enough income for the bank to pay its way and earn profits for its shareholders. Apart from cash and day-to-day loans, which have already been mentioned, there are three main types of bank assets, which are—arranged in ascending order of income and descending order of liquidity—bills (sometimes called discounts), investments, and loans (sometimes called advances). Bills of exchange can best be regarded as I O U's of well-known banking houses or merchants or of the government, maturing within three or six months. In London, and to a lesser extent in other financial centres, there is a very active market in *bills, which* are bought and sold at a discount on their face value, the rate of discount varying with the prevalent rate of interest and the length of time before the bill's maturity.[1] The rate of discount on bills is higher than can be obtained on day-to-day loans, though lower than can be obtained on other investments. But bills are very liquid. Not only is there an active market in them, but holding them for a very few months will bring them to maturity, when they will automatically be paid. Moreover, the Bank of England is always ready to lend cash on the security of 'prime' bills (*i.e.* those carrying the endorsement, and hence involving the liability, of a first-class London house).

Investments, in the case of a British bank, invariably mean *gilt-edged British Government securities*. In other countries the range from which banks select their

[1] *If the discount rate is 4 per cent. per annum, a bill with exactly* three months to run before maturity, and with a face value of £1,000, can be bought *for £990. The difference of £10 represents interest on an* investment of £990 for three months.

investments is a little wider. But in any well-conducted banking system, they must be first-rate extra-safe securities. They yield a bit more than bills, but not a very high rate of interest. Finally, there are the bank's loans or advances to its customers, including everything from an overdraft of a few shillings on somebody's housekeeping account to a loan of several millions to a large industrial concern. Even in this last category of its assets, a bank does not neglect liquidity. Banks have a temperamental dislike of long loans. They very rarely grant one for more than a year, and they usually try to confine their loans to a few months. In practice, they may be willing to renew a loan whenever it matures. In practice, too, a debtor may get into difficulties and be compelled to ask for time to pay. But in theory even loans are fairly liquid.

The proportions in which the banks distributed their assets among these five categories in 1939 can be seen from the table on page 51. But 1939 was not in every respect a normal year ; in particular, the banks found difficulty in making as many loans as they would like, and consequently had to hold an excessive proportion of investments. The ideal ratios would thus be rather different. Giving evidence before the Macmillan Committee in 1929, the Managing Director of the largest British bank gave the following distribution as the ideal towards which his bank tried to work : [1]

Cash	11 per cent.	(*Nil*)
Call Loans . .	7 ,,	(3½ per cent.)
Bills	15 ,,	(4 ,,)
Investments . .	12 ,,	(4½ ,,)
Advances . . .	55 ,,	(5½ ,,)

[1] Minutes of Evidence taken before the Committee on Finance and Industry (1931), Volume I, page 56.

The figures in brackets give the approximate average yield obtainable at that time on the different categories of assets. These yields are subject to considerable variation, being lower in periods when interest rates in general are low (' cheap money ' periods) and higher in periods of stringency. In recent years, yields have been much lower than in 1929.

It should be emphasized once more that all these assets have been acquired by issuing promises to pay. The banker is a merchant of debt, and his assets as well as his liabilities consist merely of debts ; the whole system is built up of promises to pay erected on a narrow basis of cash. In a country (such as the United States) where there are many thousands of banks, any one bank, if it had laid its assets out prudently, could conceivably liquidate entirely, that is, sell all of its assets for cash. But if all the banks of a country tried at one time to convert all their assets into currency, they could not do it, for the very simple reason that there is not nearly enough currency in existence.[1] It would almost certainly be impossible for one of the five big British banks entirely to liquidate. Liquidity is, thus, at best a relative conception. Its utility is not that it would really enable a bank to pay all its debts in a crisis, but that regard for liquidity is an aid to the banker in keeping within the bounds of prudent banking.

Within the limits set by liquidity, and by the need for keeping a proportionate reserve of cash, a bank (or, more strictly, a banking system) can make the total of its balance-sheet precisely what it wants. Between the end of 1931 and the end of 1938 the London clearing

[1] For example, in England in December 1938 the combined assets of the Big Five banks amounted to £2,164 millions, but there was only about £550 millions of actual currency (Bank of England notes and coins) in existence.

banks increased their total assets from £1,974 millions to £2,523 millions. They did this, in the main, by buying £339 millions more of investments, paying for them with their promises to pay (*i.e.* by increasing their deposits). And they were enabled to do so because they came into possession of a larger supply of cash. On page 46 we defined cash in a negative way by saying that it is the one form of asset which is beyond the control of the banks, the one form of money which they cannot 'create.' It is now clear from the preceding discussion that this item of cash is the crux of the whole system. Increase it, and the whole banking system, and with it the quantity of money in existence, swells in proportion. Diminish it and the whole banking system contracts. We have seen, from a comparison of the 1931 figures with those of 1938, how the banking system expands under the stimulus of a fresh injection of cash. If it cannot increase all its assets in equal proportion, it expands some of them differentially. Conversely with a contraction. If the banking system were suddenly deprived of some of its cash, it would have to reduce proportionately the total of its assets. Advances possibly could not be diminished at all to begin with. But bills would not be replaced as they matured, investments would be sold, and day-to-day loans called. And as the advances gradually came up for renewal, some of them would not be renewed. So the impetus of contraction would spread through the whole system. It would become more difficult to raise a loan from the banks, and the total of deposits in the hands of the public—its total supply of money—would shrink.

The banks' cash is thus the lever with which the whole gigantic system is manipulated. It is time that we enquired rather more closely into the nature of the banks' cash.

THE CENTRAL BANK

One obvious constituent of the banks' cash is actual currency—that is, notes and coin. A bank must at any time have a certain amount of currency in its tills for paying out to such of its customers as bring cheques in to be cashed. In most modern countries (though not in all) the currency consists in the main of notes issued by an institution known as the Bank of Issue, or Central Bank. In Great Britain the Bank of Issue is the Bank of England, in France it is the Bank of France, in Germany the Reichsbank. In the United States the bulk of the currency (though not all of it) is issued by the twelve Federal Reserve Banks, each of which is the Bank of Issue for its own district. The right of issuing notes, especially notes which are given the quality of 'legal tender,' is reserved, in nearly every country, to this one institution.

Not all the banks' cash, however, consists of notes of the Bank of Issue or Central Bank. In England, in May 1939, for example, only some £122.9 millions out of the total bank cash of £236.1 millions consisted of notes and coins. The remainder consists of deposits with the Central Bank.

It has been pointed out above that the banks are continually presenting claims on each other. Cheques drawn on Bank A and deposited in Bank B will be offset against cheques drawn on Bank B and deposited in Bank A, and only the net differences will remain to be settled in cash. Now these differences could be settled in currency, and in some countries they actually are settled by one bank handing over currency to another. But in most countries the banks settle these 'clearing differences' by drawing a cheque on the Central Bank,

the 'bankers' bank.' This system originated in England, and is largely due to the fact that for nearly one hundred and fifty years the Bank of England was by far the richest and the largest bank in the country. Originally it conducted a general banking business and had many private customers. Some of these customers it still has, though they are now few in number (one of them, the British Government, is the most important customer of all), but in the course of time it has gradually withdrawn from direct contact with the public and has become more and more the 'bankers' bank.' Each of the other English banks keeps an account with the Bank of England, and if in any day's 'clearing' one of these banks finds that it owes a certain sum on balance to one of the other banks, it is obviously more convenient to draw a cheque on its deposit at the Bank of England than to pay in currency. Furthermore, since 'joint-stock' or 'member' banks [1] know that they can draw out their balances at the Bank of England in currency at any time (for the deposits of the Bank of England are promises to pay just as the deposits of other banks are, and must be met in currency on demand), they will regard these balances as cash.

This system, which grew up in England more or less by chance, has been copied in nearly every other country. In many of them the Joint-stock Banks or Member Banks are forced by law to maintain deposits at the Central Bank amounting to a certain specified minimum percentage of their own deposits.

The cash of the Member Banks thus consists partly of notes issued by the Central Bank, partly of deposits

[1] The banks other than the Central Bank are usually called 'Joint-stock Banks' in Great Britain and 'Member Banks' in the United States (*i.e.* members of the Federal Reserve System). The term 'member banks' is used here as being the more intelligible.

with the Central Bank. In both cases, however—and this is the essential point—the Member Banks' cash *consists of liabilities of the Central Bank.*[1] The sum total of notes that can be issued is fairly closely defined by law, and the amount of them held by the banks does not vary very greatly. The Member Banks' deposits with the Central Bank, however, are subject to considerable variations. When we are thinking of *variations* in the total of the Member Banks' cash, it is to their deposits with the Central Bank that we must direct our attention.

The Central Bank stands to the Member Banks in exactly the same relation as the Member Banks themselves to the public. The man in the street regards his bank deposit as cash, as money; it serves him as a useful way of making payments to his fellow-customers of the banks; and if he wants actual currency for bus fares or paying wages, he can get it by drawing on his bank account. Similarly with the Member Banks in relation to the Central Bank: they regard their deposits with the Central Bank as cash; they use them for making payments to their fellow Member Banks; and they can draw upon them for such supplies of legal tender money as they require.

The analogy can be carried one vital step further. The Member Banks, subject to limits which were discussed earlier in this chapter (one of which was the maintenance of a due proportion of cash), can increase and diminish the size of their assets, and thus of their liabilities, at will. This means that they can increase or diminish the supply of money available to the public. Now the Central Bank is a peculiar sort of bank: it has

[1] This disregards the coins which the banks hold in their cash reserves, and which are liabilities of the State. But their value is very small in relation to notes and deposits at the Central Bank.

special functions to perform, and it is relieved of all competition in its special field ; but it is still a bank, and, like any other bank, it can acquire assets by giving its promise to pay. But if the Central Bank increases its assets and its liabilities, it is also increasing the cash of the Member Banks and enabling them in their turn to expand their assets and liabilities and increase the money supply of the community. Just as the Member Banks can 'create' money, provided they have the requisite cash reserves, so the Central Bank can 'create' the cash reserves of the Member Banks. And what it can create, it can also destroy.

Comprehension of this mechanism is so vital to understanding the way in which the banking system works that it may perhaps be laboured here. When a Central Bank makes a loan it does so, in the same way as any other bank, by crediting the account of the borrower on its own books. If the borrower is one of the Member Banks, this will automatically increase its 'cash.' If the borrower is not one of the Member Banks (*e.g.* the Government) he will presumably not have borrowed merely in order to increase his balance, but will proceed to pay it away. The cheques which he draws on his balance at the Central Bank will be deposited by their recipients in the Member Banks, who will present them for payment to the Central Bank. Payment will be made by the Bank of England by transfers from the account of the original borrower to the accounts of the Member Banks, which transfers increase the Member Banks' cash. Or suppose that the Central Bank has increased its assets, not by making a loan, but by buying securities. The sellers of the securities will be paid either by having their accounts at the Central Bank credited, or, more probably (since few private persons have accounts with Central Banks), by

a cheque drawn by the Central Bank on itself. This cheque will be deposited with one of the Member Banks, who will present it for payment and have its cash increased accordingly. Thus, whoever receives in the first place the Central Bank's promises to pay which it issues in exchange for the increase in its assets, they will all eventually come into the possession of the Member Banks and help to swell their cash reserves. Moreover, a small 'creation' by the Central Bank may result in a large 'creation' by the Member Banks. For example, if the Central Bank increases its assets by £1,000,000 (by buying securities or granting a loan to that amount) the cash of the Member Banks will also be increased by £1,000,000. But if the Member Banks preserve their cash ratio of 10 per cent.[1] they will proceed to expand their assets (other than cash) by another £9,000,000, thus increasing their total deposits by £10,000,000.

The Central Bank thus has the very important power of being able to vary upwards and downwards the quantity of money available to the public. Is this power subject to any limitations? We saw in examining the powers of an ordinary bank that it can only increase its assets and liabilities in proportion to its holdings of cash. A Central Bank is subject to the same limitations, for its promises to pay must similarly be met in currency on demand. Now one form of the Central Bank's promises to pay, its notes, *are* currency, and the foregoing statement might seem to imply that a Central Bank is only under obligation to redeem its promises to pay with

[1] It cannot be assumed that this ratio will always be maintained in all circumstances. The law and common prudence will prevent the ratio falling *below* the legal or conventional level. But if the Member Banks are supplied with very large amounts of cash in a period when they have difficulty in making loans or finding safe investments, they may allow their cash ratio to rise *above* the normal level for some time.

further promises to pay. This is in fact the position in many countries. Every Bank of England £1 note bears on the face of it the words, 'I Promise to pay,' signed by the Chief Cashier of the Bank. But in sober truth there is no mortal thing in which the Bank of England is bound to pay that £1 note, except another £1 note, two 10*s.* notes, or £1 worth of small change. The power of the Central Bank to increase the total available amount of money would therefore seem to be subject to no limitation, so long as the ultimate form of money, in which all others are redeemable, is merely one of its own promises to pay.

At times in monetary history, notably in Germany in 1923, Central Banks have in fact 'created' ever-increasing amounts of money with disastrous results. But in most countries their powers are held in check. In those countries which are on a gold standard the law prescribes that the liabilities of the Central Bank are to be payable on demand not only in currency but also in gold. This clearly limits the extent to which the liabilities can be increased, for not even a Central Bank can create gold; the gold plays the same rôle in the Central Bank as cash does in the Member Banks. In many countries, whether they are on the gold standard or not,[1] the law lays down that the liabilities of the Central Bank are not to exceed a prescribed multiple of its holdings of gold (*e.g.* in pre-war France gold had to be held to the amount of at least 35 per cent. of the total of notes and deposits of the Bank of France). Even in those countries which do not have these direct restrictions, an indirect check can be imposed by limiting the amount

[1] The gold standard is explained in Chapter IX. For the purposes of the present discussion a country can be said to be on the gold standard when the Central Bank is under the obligation of redeeming its notes in gold.

the Central Bank's note issue. For if the Central
ank allows the deposits of the public with the Member
anks to increase, the public will begin to draw out
orrespondingly larger amounts of currency (*i.e.* Central
ank notes). Consequently the Member Banks will
emand larger supplies of notes from the Central Bank.
The Central Bank must bear this in mind when it starts
o 'expand credit,' and, if the total amount of notes it
may issue is limited, its powers of expanding credit are
also subject to an ultimate limit.

In these ways limits are set to the Central Bank's powers of increasing the total quantity of money in existence. The limits which are set to its powers of decreasing this quantity are those of nature rather than of law. The opposite to making a loan is calling a loan, and the opposite of buying a security is selling it. But a Central Bank cannot call more loans than it has made, or sell more securities than it has bought. It cannot even sell all its securities or allow all its loans to run off, for the interest it receives on them is the only way it has of earning a living. A definite limit is thus set to the Central Bank's power of restricting credit and diminishing the amount of money in existence.

Apart altogether from legal and natural restrictions, a Central Bank exercises its great powers with a conscious regard for the best interests of the community. It is indeed often a private institution, but dividends are by custom, if not by law, limited and invariable, and it is not run primarily for private profit-making. Thus most Central Banks keep much higher reserves than they would do if they were intent only on making the highest possible profits. We have seen that the cash reserves of Member Banks can be as low as 10 per cent., and in fact they are frequently lower. But Central Bank rarely keep gold to the amount of less than 30 per cent

of their liabilities, and the proportion is sometimes as high as 70 per cent., or even higher.[1]

Subject to these limitations, the Central Bank can determine, absolutely, of its own authority, the volume of money that is made available to the public. It fixes the *total* of the Member Banks' deposits. It is still open to the Member Banks themselves to determine who shall hold these deposits, by varying their different categories of assets. The Central Bank thus determines the *quantity* of the supply of money, while the member banks retain their influence over what may be called its *quality*.

The final word in the all-important matter of the quantity of money thus rests with the Central Bank. It does not, however, necessarily follow that the Central Bank always takes the initiative in a change. This may be an appropriate moment to interpose a sample balance-sheet of a Central Bank. On page 66 are printed sample balance-sheets for the Bank of England and for the twelve Federal Reserve Banks of the United States in combination. The date of the Bank of England figures is in the summer of 1939 (some changes have occurred since the outbreak of war in September 1939, but we must suppose that they will be temporary, and a 'normal' balance-sheet is therefore printed). For the American Reserve Banks an earlier date is taken, so as to avoid the abnormal conditions of the last few years in American banking. It should be added that the balance-sheets in each case have been simplified.

These balance-sheets, it will be noticed, are remarkably similar to those of the Member Banks printed on pages 51 and 52. The chief difference is in the appearance of a large item of Notes on the liability side, but, as has already been explained, notes have no fundamental

[1] These figures refer to normal times of peace.

Bank of England, June 14, 1939

LIABILITIES		ASSETS	
Notes	£494,951,865	Gold and Silver .	£227,563,372[1]
Public Deposits (*i.e.* belonging to the British Government)	22,078,770	Government Securities . . .	415,407,389
Bankers' Deposits (*i.e.* belonging to British joint-stock banks) .	100,296,915	Other Securities .	22,895,500
Other Deposits (*i.e.* belonging to people other than the British Government or British banks) .	36,399,320	Discounts and Advances . . .	5,631,795
Capital and Surplus .	17,871,186		
	£671,598,056		£671,598,056

[1] Almost entirely gold.

Federal Reserve Banks, December 31, 1928

LIABILITIES		ASSETS	
Notes	$1,809,000,000		
Government Deposits . . .	23,000,000	Gold	$2,584,000,000
Member Bank Deposits . .	2,389,000,000	Other forms of cash . . .	205,000,000
Other Deposits .	27,000,000	Loans to Member Banks . . .	1,056,000,000
Capital and Surplus	401,000,000	Securities . .	238,000,000
Miscellaneous Liabilities .	13,000,000	Bills of Exchange .	489,000,000
		Miscellaneous Assets	90,000,000
	$4,662,000,000		$4,662,000,000

distinction from deposits. In the case of the Member Banks' balance-sheets the vital item on the liabilities side was that of Deposits, which form the cash of the public. So in the case of Central Banks' balance-sheets the vital liability item is Member Bank Deposits (Bankers' Deposits in Bank of England nomenclature), which,

together with part of the notes, form the cash of th
Member Banks.

The assets side of the balance is also similar to th
of the Member Banks. There are the three chief cat
gories of Cash, Investments, and Loans. Cash takes th
ultimate form of gold bullion, and it will be noticed th
it is a very considerably larger proportion of the tot
assets than is the case with the Member Banks. Inves
ments take the form either of Government securities
else of such short-term paper as bills of exchange. Loa
are advances to the Central Bank's customers. In th
case of the American Federal Reserve Banks, the
customers are the Member Banks. In England it is th
custom that the Joint-stock Banks (Member Banks) d
not borrow directly from the Bank of England. Whe
they are in need of funds they call the loans that the
have granted to the Money Market in the form of ca
loans, and the Money Market has to apply to the Ban
of England for the funds withdrawn by the Joint-stoc
Banks. The net effect is approximately the same as wit
the direct American method.

The method by which the Central Bank increases
restricts the cash reserves of the Member Banks is b
increasing or diminishing its own assets. This is precisel
the same principle as that which we have studied und
the description of 'creating' money. But the foregoin
analysis of the Central Bank's balance-sheet illustrat
the limitations upon its powers of creation and destru
tion. The Central Bank can add to its gold stock b
buying from those who bring gold to it, or by going ou
and purchasing gold in the market. It can similarl
diminish its gold stock either on its own initiative or o
the initiative of those who seek to redeem their notes i
gold (where gold redemption is obligatory, *i.e.* on th
gold standard). But acquisitions and losses of gold b

the Central Bank will usually bear a close relation to imports of gold into, and exports of gold out of, the country. They are not likely, in any normal period, to be large relatively to the Central Bank's gold holding; nor are they likely to come under its direct control.

Changes in the Central Bank's investments, on the other hand, are likely to be in the main the result of its own initiative. This is entirely true of its holdings of Government securities. If these decline or rise, it is because the Central Bank has deliberately sold or bought in the market. In the case of bills of exchange, the Central Bank may buy or sell of its own volition, but it may also be solicited to buy by the Money Market.

Loans, however, depend entirely upon the initiative of the borrower. It is a maxim of Central Banking practice that the Central Bank will never refuse to lend to any of its customers who can provide acceptable security for the loan. This does not mean to say that the Central Bank is quite powerless to influence the size of its loans. If it wishes to reduce them it can exact a very high rate of interest (*i.e.* it can raise the Bank Rate); if it wishes to increase them it can lower Bank Rate. The reaction to a high Bank Rate is likely to be much more immediate than the effect of a low Bank Rate. Rather than pay, say, 6 per cent. most customers of the Central Bank will get out of debt as quickly as they can. But if they can find no profitable use for funds, a low Bank Rate may not tempt them to borrow.

The Central Bank thus has considerable powers over the size of its own assets, and hence on the size of the Member Banks' cash reserves, and hence on the money supply of the public. Its investments are, in the main, subject to its own initiative. Its loans will be strongly influenced by the level of Bank Rate. These, then, are the two great weapons of the Central Bank: its power to

buy and sell securities, technically known as *Open Market Operations*; and its power to raise or lower the rate of interest it charges for loans, known as *Bank Rate Policy*.

The use of these weapons is not entirely without limitations. Thus, the Central Bank will need to keep an eye on its gold stock. That is obviously true if the country is on the gold standard, and the ramifications of Central Bank policy in gold standard conditions will be considered in Chapter IX. But even if the country is off the gold standard, that is if the Central Bank is under no obligation to redeem its notes in gold, it may well be compelled by law to observe a certain quantitative relationship between the amount of its notes and the amount of its gold, or else a fixed maximum may be set for the note issue. Thus the Federal Reserve Banks' notes must not exceed two and a half times their gold.[1] The Central Bank must therefore exercise caution in expanding the whole credit structure of the country, for if the public has more money in the banks, it will, other things being equal, draw out more in notes, and the Central Bank must be ready to provide the additional notes required without infringing the law. This is a matter which will be gone into in later chapters; our only purpose at the moment is to notice that it imposes a certain restraint upon the actions of the Central Bank.

Financial operations of the Government may also have an effect upon the Central Bank's policies. The Government banks with the Central Bank. When taxes are being collected, large numbers of individual citizens are drawing cheques upon their accounts with Member Banks in favour of the Treasury. The collection of these

[1] Since 1934, the Federal Reserve Banks' holdings of gold have been transferred to the Treasury, and the Reserve Banks have received in return gold certificates, or receipts for gold deposited. This does not affect the argument, as the minimum legal ratio of 40 per cent. still applies.

cheques will swell Government deposits at the Central Bank and diminish Member Bank deposits. But Member Bank deposits are the cash basis for the 'creation' of money; Government deposits are not. Thus anything which diverts funds from the public (which in this sense includes the Member Banks) to the Government tends to contract the supply of money. Conversely, of course, if the Government draws on its balance to pay the salaries of its Civil Servants, or interest on the National Debt, the cheques it hands out will be deposited by their recipients in Member Banks and will be presented to the Government for payment by the Member Banks, whose deposits at the Central Bank will be correspondingly increased. In England, this is not a factor of very great importance, because the Government does not build up a huge balance at one time and let it run down to nothing at other times. When the British Treasury is receiving money more rapidly than it is paying it out, it uses the surplus to pay off debt; when its expenditure is running ahead of revenue, it borrows temporarily, thus keeping its cash balance fairly steady. In the United States and some other countries, however, the cash balance of the Government frequently fluctuates quite widely. It is always open to the Central Bank, of course, to neutralize the effect of the Treasury's operations. If the Treasury is building up its balance, and thereby restricting the Member Banks' cash, the Central Bank can buy securities, or lower Bank Rate to encourage borrowers; or if the Treasury is reducing its balance, the Central Bank can sell securities or raise Bank Rate.

There are thus limits on the Central Bank's ability to control the volume of money in existence in the country. But they are broad and elastic limits. In all normal circumstances, the Central Bank can determine absolutely the size of the Member Banks' cash reserves,

and only one degree less absolutely the size of the public's deposits with the Member Banks. Over the *quantitative* aspects of Money in a modern State the control of the Central Bank is very great. To the question, 'What determines the quantity of money in existence?' the answer is, 'The policy of the Central Bank, using its free discretion within limits which are normally very broad.' This is clearly a power of the utmost social importance. Moreover, it is exercised without competition and with the consciousness of authority. In his own field the Central Banker is clearly a dictator. How far his empire extends it will be the task of succeeding chapters to determine.

THE GROWTH OF CENTRAL BANKING

Central Banking is almost entirely a development of the last few decades. It originated in England almost by chance, because the banks other than the Bank of England found it convenient to settle their clearing balances by cheques on the Bank of England, and came to regard their balances with the Bank as being as good as cash. The system was working in a rudimentary way, and the directors of the Bank of England were vaguely aware of the effects of raising and lowering their Bank Rate even before the Bank Act of 1844 had settled the legal framework of English banking, but the principles of the system of credit control by the Central Bank were not discovered and enunciated until the appearance of Walter Bagehot's *Lombard Street* in 1873. Even then the criteria by which the Bank acted were almost entirely rules of thumb, and there was very little attempt at conscious control in pursuit of a consistent policy before the outbreak of the Great War.

France and Germany also possessed their Central Banks for all, or a large part of, the nineteenth century. But, partly because these countries lacked the large and

elastic money market of London, partly because their populations did not acquire the cheque habit nearly as extensively as the British, partly because the Bank of France and the Reichsbank never confined themselves as much as the Bank of England to serving the Member Banks and the Government, but competed freely with other banks up and down the country, they never came into control of so delicate and subtle a mechanism as the English credit system. Others among the commercial nations of Europe—Holland, Sweden, Denmark, for instance—have had banks for some decades which are in greater or less degree true Central Banks.

In the United States there was nothing of the nature of a Central Bank after the collapse of the second Bank of the United States in the thirties of last century. The credit crisis of 1907—when the banks failed to meet their liabilities in cash and had to issue so-called 'clearing house certificates' as a sort of extra-legal emergency currency—demonstrated very impressively the disadvantages of a system of many thousands of unco-ordinated banks, good, bad, and indifferent. The small banks could call on the large banks for help; but when these too were affected by the panic there was no agency to which they could turn for assistance or for a temporary supply of extra cash. As a result of investigations lasting several years, the Federal Reserve Act was passed in 1913. The system set up under this Act borrows its main principles from the English model; that is to say, the Member Banks keep reserves, equal to specified percentages of their total deposits, in the shape of balances with the Federal Reserve Banks. The Reserve Banks operate upon the volume of these reserve balances by changing their Bank Rate (the rate at which they will re-discount for, or lend to, the Member Banks), and also by buying and selling securities in the open

market. But in addition there were several very interesting innovations in the Act. In harmony with the federal tendencies which have always been strong in American public life, the Act set up not one Central Bank in New York, but twelve Federal Reserve Banks throughout the country, co-ordinated and to a large extent controlled by a Federal Reserve Board in Washington. However, the history of the system in the last quarter-century has not entirely confirmed the wisdom of this scheme. The whole Federal Reserve System has tended more and more to operate as a unit, and the degree of independence possible for the separate banks has been reduced within quite small dimensions. The purchases and sales of securities, which have played a large part in the System's operations, must necessarily be made in New York, far the largest market of the country. Further, the Federal Reserve Board has tended more and more to collect the power of initiating policies into its own hands, leaving it to the individual banks only to execute those policies. In any case, it would be difficult for there to be more than one credit policy inside a single country, where the absence of tariffs and the existence of a single currency necessarily lead to the greatest degree of interdependence of the various regions. In spite of the experiment of the Federal Reserve System, or perhaps because of it, we can lay down the principle of One Currency, One Central Bank.

After the war of 1914–18 this policy was changed to the rather different one of a Central Bank for Every Currency. Wartime exigencies had disrupted the many links which previously connected the different currencies of Europe. Inflation of prices and fluctuating exchanges had reduced banking almost to chaos. In addition, there were several new and intensely nationalistic states, each with a brand new currency, and each desiring to have

a brand new currency policy to match. The Conferences of Brussels and Genoa in 1920 and 1922 declared that order could be brought out of this chaos if each country would create a Central Bank and give it control of the banking and currency arrangements. Co-operation between the Central Banks would then make a coherent policy possible. Under the leadership of the Bank of England and of the financial experts of the League of Nations this formula was gradually put into effect in the decade following the war, and even such small entities as Estonia, Danzig, and Albania were equipped with Central Banks. Under American inspiration the innovation has spread to the South American states, and there is now hardly a country in the world where a Central Bank is not either in existence or proposed.

It must not be thought that the powers of the Central Bank, or its degree of control over the banking system, are the same in every country. Banking, as it is understood in the English-speaking countries, does not exist in many of the nations now equipped with Central Banks. In these countries, banks are still in the money-lender stage distinguished earlier in this chapter. Their function is to collect and distribute the nation's savings, and the bulk of monetary transactions are made with notes rather than cheques. In these circumstances there is hardly any structure of credit for the Central Bank to control, and its functions are merely those of a Bank of Issue.

Even in the more advanced countries, however, there are marked differences in the Central Bank's powers of control. The Bank of England, for example, is a more absolute dictator than the American Federal Reserve System. The Federal Reserve Banks, for one thing, are owned by their Member Banks, and they cannot, in consequence, take too hard-hearted an attitude towards

them. Moreover, the Bank of England never lends direct to the Member Banks. It grants funds to the market either by buying securities (which it can always sell on its own initiative) or by lending to the Money Market on the security of bills of exchange; and, since Bank Rate is always higher than the market rate of discount on bills of exchange, it follows that every borrower from the Bank of England continues to lose money until the loan is repaid. This is, in effect, a guarantee that the loans will be repaid at the earliest possible moment. In the United States, however, the Federal Reserve Banks lend direct to the Member Banks, and though Bank Rate may be higher than the yield obtainable on the particular varieties of asset pledged as security for the loan, it is always open to the Member Banks to raise some of their other charges and thus increase their average rate of interest received above the rate of interest paid on their borrowings from the Reserve Banks. This remedy will not be open to an individual bank in a period when the Member Banks as a whole are not borrowing heavily from the Reserve Bank, since competition will prevent it raising the rates it charges to its customers. But if the Member Banks are all borrowing together, they may find it profitable to go on doing so, and the control of the Reserve Banks will be impaired when it is most needed.

There is one function which the Central Bank performs in every country, which is at times the most important of all. The Central Bank is the lender of last resort. Every monetary system suffers at times from a sudden panic among the public which leads them to demand cash. They may be frightened that their investments are going to become worthless, or that their deposits in the banks are going to be immobilized by the closing of the banks. Or for any one of a variety

of other reasons they may want to hold more of their wealth in the liquid form of cash. The more highly developed banking systems are more prone to suffer from such a ' liquidity preference ' than the less developed countries ; but none are immune. There is not a country in the world which normally possesses enough cash or currency to meet all its liabilities. Unless the credit system is to break down, with the tremendous shock which that would involve to the public's confidence in it, there must be some means, in an emergency, of temporarily expanding the supply of cash. This the Central Bank can do. It can expand the deposits on its own books of the Member Banks. Or if the public is demanding notes, it can print more and lend them out. The laws of most countries, while limiting the total note issue of the Central Bank, make provision for temporary excesses. In England, it used to be customary in such cases to ' suspend the Bank Act,' *i.e.* for the Government to authorize the Bank of England temporarily to disregard the limitations placed upon its note issue by the Bank Act. Some such provision for elasticity there must be, since the alternative is widespread bankruptcies, not because of any real insolvency, not because assets are unequal to liabilities, but merely because the supply of legal tender currency is temporarily too small to meet the suddenly enlarged demand. This is illustrated by the American panic of 1907, when, because the supply of currency could not be expanded, the New York banks were driven to issue ' Clearing House certificates ' which were, in fact, banknotes, although the law had to pretend that they were not. Rather than be compelled to resort to such subterfuges it is far better to have, in the Central Bank, a ' lender of last resort,' empowered to deal with such panics in the only way which will alleviate them, by providing cash for all truly solvent borrowers.

We have thus listed a number of functions of a Central Bank. It is the bankers' bank and the Government's bank[1]; it is the institution which issues paper money; it is the lender of last resort. To perform the two latter functions, however, it does not need to be a bank. The Government itself is perfectly competent to issue notes and, in emergencies, to lend notes to the public. It is only when the development of the banking system has been carried a step further with the building up of a cheque system, when the bulk of the public's money comes to consist of bank deposits, that a bankers' bank becomes necessary. It is then that the Central Bank begins to emerge in its fullest proportions.

Mention of the Government raises the question how far the Central Bank can, or should, be independent of the Government. There is much to be said for removing the Central Bank from the immediate compulsion of political opinions. In the post-war epoch there were so many examples of Central Banks being dominated by the disastrous financial policies of Governments that the international conferences which discussed the subject made almost a dogma of Central Bank independence, carrying it as far as advocating the private ownership of Central Banks. There has been a reaction from these views. Private ownership of Central Banks may mean their ownership by, and control in the interests of, rich bankers or industrialists to the exclusion of the interests of the community as a whole. Since this is still a matter of acute political controversy in many countries of the world, it must be enough to say here that, whether or not the State owns the Central Bank, it must necessarily exercise a considerable measure of control over it. This follows inevitably from the very large and important

[1] The American Treasury occasionally deposits funds in other banks, but the Federal Reserve Banks conduct the bulk of its banking business.

powers which the Central Bank possesses. In fact, the modern tendency is for the State to own the Central Bank but for the actual control to be in the hands of a Governor or a Board appointed for a period of years, and more or less independent of political domination during that period. The dispute is, in any case, a somewhat artificial one. The importance of banking policy for the community at large is fully recognized nowadays, and no responsible Government, whatever its political complexion, could afford to surrender so large a portion of the attributes of sovereignty to an autonomous body. Ultimate Government control there must be, and the precise point on the gradation from ultimate control to day-by-day interference at which Central Bank independence begins is a matter of expediency rather than of principle.

THE MONEY MARKET

It will be as well, before concluding this chapter, to give a brief description of the part played by those institutions which cling to the fringe of the banking system and are known as the Money Market. There is no necessity here to mention most of the many different varieties of financial institution which are to be found in a great centre such as London or New York—insurance companies, finance companies, investment trusts, hire-purchase finance companies, and so forth. We are concerned only with those which play a part in the smooth operation of the banking system. The Money Market, properly speaking, is the market for short-term and day-to-day loans. It is a great advantage to the banks, as we have seen, to be able to lend out a certain amount of money and earn interest upon it, and yet know that it is repayable within a few hours. On the

other hand, institutions which can find a use for such short-term loans can finance themselves very cheaply as a result. For loans of this sort there is always some demand and always some supply, both varying from day to day.

In London, the chief demand for short-term loans comes from the discount houses. We have already had occasion to mention the bill of exchange. It can best be thought of as a post-dated cheque, drawn on and accepted by a house of first-class standing. As such it is a negotiable instrument, a security of value. London has always financed not only her own foreign trade but that of foreign countries as well, by means of bills of exchange. The creditor draws his bill upon the debtor, or upon the financial house in London which by arrangement with the debtor accepts bills on his behalf (these houses thus came to be known as 'accepting houses'). After acceptance, the creditor sells the bill in the market, and thus gets his money at once, while the debtor does not have to pay until maturity. A large market grew up in London for handling these bills of exchange with many firms of 'discount brokers' or dealers in bills of exchange. The British Government avails itself of this mechanism for raising short-term money at low rates of interest. It issues Treasury Bills, which are no more than its own promise to pay in three months' time. Every week the market is invited to submit tenders for the week's batch of Treasury Bills, the available bills going to the highest bidder. At the time this chapter is written, a Treasury Bill for £1,000, payable in three months, is sold at the tender for about £997 10s., the remaining £2 10s. representing interest (or, more accurately, discount) of 1 per cent. per annum.

The discount brokers deal in commercial bills of exchange and Treasury Bills alike. They make their

profit out of the fractional differences in discount rates at which they buy and sell bills. But when the total discount amounts to only £2 10s. on £1,000, it is obvious that a discount broker must handle very large amounts of bills in order to make a sufficient profit. In order to finance his transactions he borrows at call from the banks. This is a perfectly safe thing for him to do ; for if one bank calls its loans, he can borrow from another. If all the banks call their loans together, he can always borrow on his bills from the Bank of England, though to do so will involve him in loss, since the Bank of England's rate for borrowing, unlike the other banks' rate, is always higher than the market yield for bills.

In New York the mechanism is rather different. The bill of exchange has never been popular with American financiers, and though efforts have been made in the past two decades to organize a discount market, they have never met with full success. On the other hand, there is another source of strong demand for short-term loans. This is from the stockbrokers. Fundamentally, their need of loans is similar to that of the London discount brokers : both are temporarily carrying valuable securities for which there is a large free market. But there are some important differences. The discount broker is borrowing for his own account ; the stockbroker for the account of his clients. The discount broker's bills are not subject to more than very small variations in value ; the stockbroker's stocks and shares may move up or down very rapidly. The discount market is steady and unsensational ; the security market is subject to very wide swings, not only in the value of the securities traded but also in the volume of business done, and hence in the volume of credit required. Finally, the discount broker can, in the last resort, borrow from the Bank of England on the security of his

bills; but neither the Federal Reserve Banks nor other Central Banks will lend money on Stock Exchange securities, except sometimes for Government securities.

For these reasons, while the London Money Market is a considerable convenience to the English banking system, the New York Call-Money Market has frequently proved to be a source of considerable worry to the American banks. There is, of course, some lending to stockbrokers in London, but it is not very large, mainly because securities purchased on the London Stock Exchange do not (in peace-time) have to be paid for, as in New York, on the next day, but only at the fortnightly account. Similarly, there is some lending on bills in New York, but it is very small.

WHAT IS A BANK?

When Parliament, for the purposes of legislation, found it necessary to define a bank it could do no better than define it as any firm or institution doing a *bona fide* banking business. At the end of this chapter we cannot do very much better. We have described a bank and differentiated the various categories of banks, but we have hardly provided a succinct definition. Perhaps the closest approach would be to say that a banker is a dealer in debts—his own and other people's. The mere exchange of indebtedness would have no purpose unless there were some vital difference between the varieties of debt. Banking realizes its purpose—and at the same time achieves a very great social importance—through the fact that a banker's debts are generally acceptable to the public in discharge of obligations and hence become money. The banker's business is, then, to take the debts of other people, to offer his own in exchange, and thereby to 'create' money. He may be a dealer

in debts, but indebtedness is only the obverse of wealth, and it would be equally permissible to describe the banker as a liquefier of wealth.

The whole system necessarily depends upon the public's confidence in the banker's willingness and ability to meet his obligations. It is in the truest sense a credit system. In Great Britain, where very few members of the general public can remember banking trouble, that may sound like a peculiarly platitudinous observation. But other countries, notably the United States, have had the most startling demonstrations in recent years of what happens to a banking system when the public's confidence is shaken. This dependence on confidence often makes the banker act in a paradoxical manner. When times are good and credit is plentiful, he is perfectly ready to assist in making it still more plentiful. But when times are bad and the breath of fear has already chilled the markets, the banker must be cautious, conservative, and severe. His business has been aptly compared to that of a man who stands ready to lend umbrellas when it is fine and demands them back when it starts to rain.

Bankers and the banking system have been subject in recent years to a very considerable volume of criticism. Some of these criticisms are the inevitable fruit of the way in which the banker is compelled to behave by his dependence upon public confidence (which is not always the same thing as public praise). But there are other criticisms more well-founded than this, and the present chapter may profitably be brought to a conclusion by a brief mention of two of the more important of these criticisms of the banking system as it exists to-day.

It is frequently urged against the British banking system that it grew up to serve commerce, especially foreign commerce. Nowadays, it is complained, commerce is far less important as a demander of credit

than domestic industry. But the English banks have no knowledge of, or sympathy with, the needs of industry. When they make a loan they insist upon its repayment in a period too short to be of any use to an industrial firm. They will accept goods moving in trade as security, but not goods in course of manufacture. And finally the industrialist has no access to the discount market, with its low rates of interest.

Some of these criticisms are badly exaggerated, and the British banks do considerably more for British industry than is sometimes charged. But there is a residuum of truth in the complaint. British banks have, in the past, been much less directly helpful to industry than the banks of either Germany or the United States. In Germany, the connection between banks and industry was very close and direct. Banks would frequently take over virtually the whole financing of a firm, supplying whatever capital it required and nominating representatives to sit on the board of directors. In America, the same result was achieved in a slightly less direct way. The large banks, through their subsidiary companies, assisted industrial firms to make public issues of their securities and thus raise capital from the public. The banks directed the whole proceeding, making handsome profits in the process, and retaining a substantial influence on the direction of the industrial companies concerned.

British bankers have always held deliberately aloof from these practices, and the experience of the German and American banks in more recent years might seem to confirm the wisdom of British abstention. Loans to industrial concerns suffer from the grave disadvantage that they are not liquid. Once granted, they frequently cannot be withdrawn except after a period of years. In this respect they are no worse than many of the loans

granted by British banks. But there is some difference between having a variety of small loans in different degrees illiquid, and being closely associated, in the full light of inevitable publicity, with one or two large concerns which are known to be doing badly. When industrial banking takes the American form of buying the securities of industrial companies rather than making loans to them, this difficulty is overcome, for the securities can be sold, sooner or later, on the Stock Exchange. But there is the further difficulty that industrial securities are subject to very large variations in price, and the bank may achieve liquidity only at the cost of losing irrevocably a large proportion of its original investment.

The advocacy of industrial banking comes in the main from those who are impressed with the importance to the community as a whole of securing ample supplies of capital for industry. But the banker has no exclusive responsibility to industry. His first duty must always be to preserve the confidence of his depositors rather than to take upon himself the duty, which properly belongs to the State, of ensuring the smooth working of the national economy. A banking system which is beset by panic and besieged by clamant depositors is of no assistance but a positive hindrance to the smooth working of the economic system, whether it professes to follow the principles of industrial banking or not.

The purpose of this book is to explain rather than to criticize, and there is no necessity to pronounce a comprehensive judgment on the vexed issue of industrial *versus* deposit banking. It may be suggested, however, that, as with many similar controversies, the truth lies between the two extremes. There is need in Great Britain for some mechanism for ensuring an even flow of capital into industry, and the banks might well be

asked to play their part in creating that mechanism without venturing so hazardously far into the morass as the American and German banks have done in the past. But if a choice must be made between the different functions of a bank, the most important is that it should provide a stable and convenient means of making payments. There are other ways of providing industry with capital ; but the modern world knows no more efficient form of money than is provided by the bank deposit.

A second line of criticism which is increasingly being urged against the present organization of the banking system, is that institutions in possession of such enormous powers should not be left in private ownership. There are really two branches of this argument. The first is that since bank-money is 'created' money, bankers should not be allowed to charge interest for its use ; that, since it is public confidence which gives the banker's debts the quality of money, the public rather than the banker should reap the fruit of it. The second branch of the argument admits that it is allowable for the banker to charge interest on 'created' money, but would remove his business from private control because of its paramount importance to, and influence upon, the economic policy of the community as a whole.

It is not our present business to say right or wrong to either of these arguments. But it is permissible to suggest that the foregoing sections of this chapter provide the materials for at least a partial answer to the first argument. Bankers cannot 'create' money, either without limit or without cost. Their business, as has been explained, consists of a balancing of their own indebtedness against other people's indebtedness, and their profit arises from the lower rate of interest which they pay on their own indebtedness than they receive

from their debtors. Now it is obviously preferable to be a banker's creditor than to be the creditor of anybody else, since a banker's debts are money, while other people's are not. It would seem to be a legitimate corollary that a lower rate of interest should be paid on the debts which have this advantage to the creditor than on those which have not. But to say that the banker can legitimately make some profit is not to say that he can legitimately make any profit he likes. There is a very strong case for putting banks on the same footing as other public utilities and for controlling their operations and limiting their profits by law.

The second argument for public control of the banks can be regarded in much the same light as the argument for State control of the Central Bank (see page 77). That the State must retain some measure of control of an industry so intimately affected with the public interest as banking is stands to reason. But the precise degree of control which should be exerted, and the question whether it should go as far as public ownership, are matters of taste rather than of principle. There is certainly no divinely appointed law that would keep banks as private institutions for ever, and their nationalization, if carefully thought out and temperately advocated, would do little harm. But, unless the nationalization of the banks made them safer or cheaper (neither of which results would follow automatically), it would do little good. The whole question is one of very little interest to the economist or to any one who seeks to understand the fundamental workings, as opposed to the surface colouring, of the monetary system. It can safely be left to the political dogmatists.

CHAPTER III

THE VALUE OF MONEY

THE PRICE LEVEL

THE essential characteristic of money, which sets it apart from all other substances, is that it is not desired for itself. It is, in the fullest sense, a medium or means, or mechanism of exchange. Nobody, with the pathological exception of the miser, desires to acquire money except for the purpose of some day paying it away again in return for goods and services of real value. Money in itself may be quite valueless ; a £5 note, regarded as a piece of crinkly paper, is worthless ; its only value arises out of its acceptability in exchange.

This major principle of money, which has been insisted on to the point of tedium, has an equally platitudinous—and equally important—corollary. The price of anything is the ratio at which it exchanges for money. If the price of a ton of coal is 25s., the ratio of exchange is 25s.=1 ton, or 1s. 3d.=1 cwt. But since money itself is only the intermediary mechanism of exchange, the really fundamental thing is the ratio at which coal will exchange for all other goods and services. To the man who has a ton of coal to sell, the knowledge that its price is 25s. has meaning only because he carries in his mind an idea of what 25s. will buy. If he did not know that, the price would tell him nothing about the value of his ton of coal. Price, in short, is not the same thing as value.

The point can be very easily illustrated by supposing that on a given day the price of everything—coal, bread, postage stamps, a day's labour, the rent of houses, and everything else—were to double. Prices would have altered beyond question. But values would not. Everybody's income, though double in amount, would purchase exactly what it did before. A ton of coal would be worth exactly the same number of loaves of bread as previously. The only value that would have altered would be the value of money itself, for the value of a £1 note is what it will purchase of goods and services in general, and that value would have been halved.

This conception of the value of money is one of the most important in monetary economics—and one of the most elusive. It is comparatively easy to say that the value of money is what it will buy. It is only a simple additional step to realize that the higher are prices the lower is the value of money. But that is where the simplicity stops. For the obvious next question is 'which prices?' It is tempting to answer 'all prices.' But when the ordinary citizen thinks about the value of money, is there any point in trying to tell him that the value of money to him is affected by the amount of wolfram or antimony or trinitrotoluene that can be bought for £1? He is surely interested only in the amount that can be bought for £1 of the things which he actually does buy, or might reasonably be expected to buy. But even if the inquiry be restricted to such articles alone, there is still room for almost infinite variation. The ordinary German-in-the-street is interested in the price of rye bread; the ordinary Englishman-in-the-street is not. Mrs. Smith is affected by changes in the price of margarine; Mrs. Jones, who lives next door and never eats the stuff, is not. In short, there are no two people to whom money has the same value when

they set out to spend it. Moreover, we cannot confine our attention to the spending of money by the ordinary man or the ordinary woman. Everybody is also interested in what he sells—which for most people means labour ; wages are an obvious constituent element in the value of money. The merchant wants to know what his money will buy in bales of cotton or bushels of wheat or tons of steel.

Thus the phrase 'the value of money' without qualification is almost meaningless. There is an infinite number of different values of money according to the uses to which it is put. The only practical way to get over this difficulty is arbitrarily to establish certain standard values of money. Usually, three standards are distinguished. The first is the value of money in buying all those commodities whose prices are quoted and recorded on public markets. There is, of course, no particular virtue in these commodities. They are usually chosen merely because their prices are so readily available. And precisely because they are recorded, this is the value of money which is most frequently referred to, and when the phrase is employed without qualification it can generally be taken to refer to this. It so happens that most of the commodities which are so quoted are raw materials rather than goods finished for the consumer (*e.g.* wheat, but not bread). It also happens that the quantities dealt in are large. For this reason, this value of money can be called the wholesale value.

The second value of money which is usually distinguished is the value of money in buying the goods and services which the ordinary family consumes. This involves two separate difficulties. The first is that of finding out what, in fact, the average family does buy with its income, which may involve very extensive enquiries. And the second difficulty, after a standard

list of commodities has been drawn up, is to find out what their prices are. There is no standard price for bread as there is for wheat ; it varies from town to town, and sometimes from shop to shop. In meat there are even greater varieties. As for the rent of houses (a very important item in most families' expenditure), it is more accurate to say that there is no uniformity at all. For each commodity, therefore, a large number of price quotations must be collected before an average is struck. This second variety can be called the retail value of money, or the cost of living.

The third important variety is the value of money in hiring labour, which can be determined from the rate of wages payable for a day's work. But here again there are obvious difficulties of definition, as well as a great variety of different kinds of labour. This can be called the labour value of money. The three varieties here distinguished are those most usually met with. But other special varieties of the value of money are sometimes needed. For example, in nearly every country it is sometimes necessary to speak of the value of money to farmers, which is affected by the rather special lists of things which farmers in that country have to sell and buy.

Any exact definition of the value of money must, then, necessarily be a somewhat complicated affair. The wholesale value of money is the value of money to a person who happens to be concerned only with those commodities which are traded in wholesale on a public market. The retail value of money is its value to a family which happens to buy exactly those things which it has been established by inquiry that the average family does buy. And the labour value of money is its value to a man or a business firm which wants to hire every variety of labour. Now these are, obviously, very

arbitrary definitions. But where there is such infinite variation, some degree of arbitrariness is necessary.

On these arbitrary assumptions we can succeed in defining the value of money—or, more accurately, three different values of money. But the difficulties are not over yet. Having defined the wholesale value of money we must measure it. What is the wholesale value of £1? And the only possible answer would be such a lengthy and unwieldy list—bushels of wheat, bales of cotton tons of steel, gallons of oil, bags of cement—that it would be virtually useless. Any attempt to write down the value of money, in any of its varieties, would be a very lengthy task, and the list, though accurate, would be incomprehensible.

It must therefore be admitted that the value of money cannot be measured. Fortunately, we do not often need to measure it. What we do want to know, in measurable form, is not the absolute value of money so often as its value relatively to other periods. Is £1 worth more or less than it was last month, or last year, or ten years ago? Thus, what needs to be measured is not so much the value of money itself as *changes* in the value of money.

This can be done by the statistical device known as an index number. The calculation and interpretation of index numbers are an intricate science in themselves. But we are fortunately concerned only with its broadest outlines. Let us suppose that we are interested for the moment in the wholesale value of money. This is determined by the prices of the wholesale commodities which enter into the definition ; the higher these prices are, the lower will be the wholesale value of money and vice versa. Consequently we need to calculate an index number of wholesale prices. The first step is to choose a period in the past as a base. Any period will do, but it is necessary to have some base to which later

prices can be compared, just as every map-maker must have a datum-line to which he can refer altitudes. Altitudes are expressed in 'feet above sea-level,' the sea being the obvious datum-line (although it is by no means level); but they would be just as accurate if they were expressed in 'feet above (or below) the top of the Eiffel Tower.' For prices there is no datum-line as obvious as the sea, so each compiler of an index number chooses his own. By convention among them, certain years are favourites. Thus in Great Britain 1935 is becoming a favourite base year, because there are more statistical data available for that year than for many others. The year 1929 is also frequently taken as a base year because it was the eve of the Great Depression, 1913 because it was the eve of the last war, and so forth.

The base year having been chosen, the next step is to list the prices of all the commodities in question in that year. Let us suppose we have chosen 1913 as our base year, and listed all the prices in that year. We now want to calculate an index number for 1937. We make a second list of the 1937 prices of the same commodities. In order to have them in the same form we express them all as percentages of the 1913 price. Thus, if coal was 15s. a ton in 1913 and 30s. a ton in 1937, we put the 1913 price down as 100 and the 1937 price down as 200. For some other commodity the prices might be 100 in 1913 and 60 in 1937. The final step is to work out the average [1] of all the 1937 prices, and that

[1] There is more than one way of working out an average. The simple, or arithmetical, way is to add up the items and divide by the number of items. The geometrical method of averaging three numbers is to multiply them together and take the cube root, of four numbers to multiply them together and take the fourth root, and so on. Thus the arithmetical average of the two figures mentioned in the text is $\frac{1}{2} \times (200 + 60)$, or 130; the geometric average is $\sqrt{200 \times 60}$, or about $109\frac{1}{2}$. The choice between the two methods is one of the complicated technical problems which can be ignored here.

is the index number for 1937. If we say that the index number of wholesale prices in 1937 was 107 (1913=100), that means that the prices of these commodities *on the average* were 7 per cent. higher in 1937 than in 1913. Individual prices may, of course, have been lower or very much higher.

This is the broad outline of the method of constructing index numbers. Of all the qualifications and complications, only one need be mentioned here. The method outlined above depends upon the tacit assumption that all the commodities in the list are of equal importance. But they manifestly are not ; a large rise in the price of pins is considerably less important than a small rise in the price of bread. This difficulty can be got over by the device known as 'weighting.' The simplest form of weighting is to include in the index three or four varieties of the more important commodities. Thus a wholesale price index might include Canadian, Australian, Argentine, and English wheat. Since all four would tend to move fairly closely together, the net effect would be that a change in the price of wheat would have four times as much 'weight' in the final index as an equal change in the price of some less important commodity. The same effect could be attained by taking only one variety of wheat and including it four times over in the index ; this more direct method is the one usually adopted. For some sorts of index numbers, weighting is essential. But it is necessarily an arbitrary process, depending upon the opinion of the compiler. Moreover, weights that are correct at one time may be incorrect at other times. Thus the price of raw cotton is a considerably less important constituent of the total wholesale value of money in England than it was when cotton was the country's largest industry, and some of the older wholesale price index numbers

are somewhat distorted nowadays because they give cotton such prominence.

PRICE FLUCTUATIONS

By using the technical device of an index number it is thus possible to measure changes in the value of money—or, more accurately, changes in a number of different aspects of the value of money, each particular aspect being relevant to a different purpose. But to describe a statistical technique is not quite the same thing as proving that there is any reality in the concept of a 'value of money.' After all, it would be possible to use exactly the same technique to measure changes in the value of everything else relatively to knitting needles, but though you could produce index numbers to measure the 'wholesale value of knitting needles,' the 'retail value of knitting needles' and the 'labour value of knitting needles,' you would not have established that there is any real substance in such a concept. Similarly, if prices move about in a perfectly haphazard way, some going up and others going down, without any visible common tendency, any index numbers that are calculated will be mere arithmetical ciphers or accidents of calculation. It is only if prices—not necessarily *all* of them, but most of them—tend to move together—that is to say, in the same direction at the same time—that we can talk of there being a value of money in any real sense.

It needs only a very slight acquaintance with the behaviour of prices in actual life to realize that they do in fact move together to an astonishing extent. Each particular price is subject to its own influences. The price of barley, for instance, is affected by the quality of the year's barley crop, but no other price is subject

to the same influence. It may be that for some commodities their own particular influences are strong enough to outweigh the general influences that act on all prices. There will thus always be some prices moving downwards at times when the majority of prices are moving upwards, and vice versa. But these are exceptions, and the majority of prices move so closely in unison that it is possible, without any distortion of language, to speak of periods of rising and falling prices. Moreover, there is a strong tendency for any price that, in one period, strays away from the average to return to it in the next. This is obviously not so when some new discovery or invention has permanently cheapened a commodity, or when the exhaustion of the main source of supply causes it to be lastingly dearer. But these again are exceptions, and large sums of money have been made by observing which prices were drifting away from the average of similar commodities and by speculating on the commodity markets on the assumption that they would shortly return. Behaviour of this sort can be explained only on the presumption that there is some force which acts on all prices and can be held in abeyance only by very marked individual characteristics of particular commodities. It is this force that creates the *average* level of prices. It is this force that governs and creates the value of money. Every price is a ratio between a particular commodity or service on the one hand and money on the other. If, then, there is some influence common to all prices, which causes them to go up and down together, and we wish to discover what it is, it is obvious that we must look for it in the one element that is common to all prices—namely, money itself.

This puts a new aspect on the nature of money. Its purpose, as we have seen, is to serve merely as an intermediary, and the only real purpose in recording

that a hundredweight of coal is worth one shilling is to have a convenient means of relating the value of coal to that of bread and ribbons and thousands of other things. But here we have discovered money, the intermediary, leading a life of its own. Instead of acting merely as an accounting mechanism, it exerts an influence of its own on all prices. It is as if the yardstick started monkeying with the lengths. It is this failure of money to be merely neutral, its insistence on having a part of its own to play—the fact, in short, that the value of money is something real and not an arithmetical accident—that creates almost all the difficulties and problems of monetary economics with which this book is concerned.

But though the majority of prices tend to move in the same direction at the same time, it must not be thought that they all move to the same extent. On the contrary, there are very great variations in the volatility of different prices, and we can draw up a regular order of volatility. The prices that move most rapidly are those of certain raw materials that are traded on speculative markets. Rubber is one of these. The supply of rubber is very hard to alter—or at least to increase—in a short time, as it takes five years after a rubber tree is planted before it bears. On the other hand, the demand for rubber is subject to violent changes. As a result, the price of rubber moves rapidly up and down; it has been said that there is rarely a year in which the price of rubber is not at some time half what it is at another time. Rubber is the star performer, but there are many others almost as volatile. The various schemes that have been drawn up in recent years to control the supply of certain raw materials, such as rubber itself, tin, sugar, tea, etc., have had only limited and sporadic success in removing fluctuations, and the prices of mining and agricultural products—the raw

materials of industry and food—are still the most liable to wide fluctuations.

The prices of manufactured goods fluctuate less than those of raw materials. This is partly because so many manufactured prices are controlled, either by an individual manufacturer or by a trade association. But even when there is no control, many of the costs that enter into the process of manufacture are comparatively fixed. If manufacturers, in times of falling prices, lowered very far the prices at which they sold their goods, they would find themselves selling at a loss. They will generally prefer not to sell at all, or, if they can control their prices, to fix them at a level that avoids loss, though it may also restrict the sale—a choice that is not open to the farmer. For very much the same reasons, retail prices always move less violently, whether up or down, than the wholesale prices of the same commodities.

Wages are even slower to move, at least in countries like Great Britain where there is a strong Trade Union movement. It is an extremely difficult and unpleasant business to get wages down, and precisely for this reason employers are slow to agree to any increase when prices are moving up. But in spite of these hindrances, wage-rates do show a tendency to fall whenever there is a long period of falling prices, and a stronger tendency to rise with other prices. But they move only after some delay, and in much smaller proportion than the majority of other prices. Salaries are, on the whole, even less quick to move than wages, and many professional fees, like the lawyer's six-and-eightpence and the doctor's guineas, hardly ever vary without a cataclysmic change in the value of money.

At the other end of the range of volatility from rubber are prices and payments that are fixed by contract.

The rent of houses, for example, is fixed for a period of years, and though higher prices of building materials and building labour, by raising the cost of new houses, might tend over a period of years to raise the rents of old houses too, the process is inevitably a slow and hesitant one. Other contracts are written for even longer periods than rent agreements. Life insurance policies, for example, are redeemed forty, fifty, and sixty years after the terms of the contract were first fixed. Debts frequently last as long ; bonds, for example, may have a life of anything up to a hundred years, and large parts of the Government's debts are everlasting.

It follows from these varying degrees of volatility that different classes of people will be differently affected by changes in the value of money. The farmer, for example, tends to be affected immediately and to the full extent so far as his income is concerned. Apart from efforts made by Governments to assist agriculture, the prices of the things a farmer has to sell tend to rise in a period of rising prices, or fall in a period of falling prices, considerably more than the average. But many of the things that a farmer spends his income on, being manufactured goods, change much less, while his rent may vary very little and his payments of interest on mortgage or other debt not at all. A farmer will therefore tend to be hard hit by falling prices and benefited by rising prices.

The urban wage-earner is in the opposite position. His income varies less than the prices of the things he buys. Thus, in a period of falling prices, wages might fall by 10 per cent., while the cost of living fell by 25 per cent. Thus, although the wage-earner will get only £90 where he formerly got £100, the £90 will buy as much as £120 (*i.e.* $\frac{100}{75} \times 90$) formerly did. A wage-

earner who keeps his job (a very vital qualification) tends in this way to gain from falling prices and to lose by rising prices.

The person whose income is entirely fixed is affected in the same way, only more so. Such persons include those who live on the interest from bonds or on mortgage interest, or on pensions or annuities, etc., etc. If the cost of living falls by a quarter, these people, with their unchanged cash income, can buy a third more than they previously could. In any real sense they are $33\frac{1}{3}$ per cent. better off. Conversely, when prices rise, people with fixed money incomes lose. This is, of course, important for those with fixed incomes. But it is also of importance for the community at large. At any time a large amount of debt is outstanding. Some of it has been contracted to finance the production of remunerative capital, such as factories, houses, ships, railways, and thousands of other things of the sort. The rest of the debts in existence merely represent the past extravagances of governments and individuals. It is possible to draw a distinction between the two varieties : 'living debt' or 'capital' is borne by the remunerative assets it has helped to bring into being. 'Deadweight debt' is, as its name implies, an obligation without offsetting assets. Now every time the average level of prices falls, the number of goods and services represented by £100 of debt increases. The factories that the capital has built do not produce any fewer goods, but the goods sell for less money, since prices have fallen. Thus the physical capital of the community can provide the service on a smaller proportion of the debt outstanding and the 'real' burden of the deadweight debt is increased. The gain of the man with the fixed income is his debtor's loss. Too rapid or extensive a fall of prices would raise to an intolerable degree the burden of deadweight debt,

and lead, at the best, to widespread bankruptcies or, at the worst, to social disturbance. This, more than any other factor, is probably the explanation of the fact that the general tendency of prices throughout history has been steadily upwards (the price of a bushel of wheat was about 6d. in the reign of William the Conqueror and 3s. 6d. before the outbreak of the present war). Only by a periodic rise in prices (*i.e.* fall in the value of money) has the community been able to escape from being choked by usury. This consideration should be borne in mind when the advantage of falling prices to the creditor is under discussion.

The business man prefers rising prices. Most forms of manufacture consist in buying raw materials and selling finished goods. When prices are falling, therefore, the business man gets his materials cheap. But this gain is usually more than outweighed by the fact that the 'real' burden (*i.e.* in terms of the goods and services they represent) of wages, interest, taxes, and other fixed or semi-fixed charges rises. Moreover, manufacture takes time, and when prices are falling the manufacturer finds that by the time his goods are made he cannot sell them for as much as he calculated when he bought the materials months earlier. Profits are the residual item that takes whatever is left over after other charges for land, labour, capital, and materials have been met. When prices are rising, the profit-taker benefits automatically from any failure of other prices to advance as rapidly as the average. In a period of falling prices, the profit-taker loses by his inability to pass on the average fall in prices in full to everybody else.

Falling prices are therefore welcome to wage-earners and salary-earners (so long as they keep their jobs), to creditors and to all whose incomes are fixed in terms of money. Rising prices, on the other hand, are welcome

to nearly all business men and debtors, and especially to those who produce primary materials. If we judge solely by which of these two categories are most deserving, we might well conclude that falling prices are to be preferred, on the whole, to rising prices. This would certainly seem to be true in a rapidly expanding community, when falling prices may be the only way in which those whose incomes are fixed in money can be given some share in the growing prosperity of the community.

Social justice, however, is unfortunately not the only criterion by which economic phenomena can be judged. The wage-earner gains from falling prices only if he can succeed in keeping his job, and one of the outstanding lessons of economic history is that periods of falling prices tend to be periods of heavy unemployment, while periods of rising prices are associated with high activity and low unemployment. Falling prices, in fact, go with slumps and rising prices with booms.

This relation between prices and employment is very close and definite—indeed, it would be hard to find a closer correlation in the whole field of economic records. It would be tempting to assume that it is the fluctuations in prices that *cause* the fluctuations in employment. There are, indeed, some ways in which it is easy to see that price movements cause corresponding movements in production. Thus merchants and others tend to hold off from buying as long as prices are falling ; they prefer to meet demands by drawing on their stocks, waiting to replenish them until prices have reached bottom. Falling prices thus lead to smaller orders being given to the producers. But as soon as prices do touch bottom and start rising, everybody hastens to replenish their stocks before it becomes too costly. The first rise in prices after a long fall may often cause a remarkably large and

sudden increase in production. This is one way in which price movements have a direct causal effect on the level of production and employment. Another is through the effect of price changes on profits. It has been pointed out that profits, in general, are swollen by rising prices and depleted by falling prices. When profits are ample, business men will not only be willing to expand their production to the utmost, they will be ready to give orders for new factories to assist in the expansion, and the building or equipping of these factories naturally creates additional employment. But when profits are inadequate, few orders for new equipment will be placed and the industries that provide buildings and equipment will languish.

Thus there are ways in which price movements can be said to cause fluctuations in employment. But the opposite is just as often true. The most frequent cause of price reductions is lack of business, and price rises occur because demand is insistent. This can be seen from a study of the different ways in which depression affects different sorts of industries. When the general prosperity of the community falls off (for reasons that will emerge later in this book) and the demand for goods declines, industrial manufacturers sell fewer of their goods, while lowering their prices only a little. Depression comes to industry in the form of unemployment rather than in lower prices. But an agricultural community has little scope for unemployment. Once the crop is sown, a limitation of production is hardly feasible ; all that is grown must be sold. Thus the farmer has as much work as before, but depression hits him through lower prices. Now the farmer's lower prices help to intensify industry's unemployment, since the farmer can afford to buy less ; while industry's unemployment lowers the demand for food and helps to push the

farmer's price down. Thus low prices and low employment are both cause and effect of each other. But fundamentally, both are alike the effects of whatever it is that starts a depression.

Until the last decade or so, economists tended to concentrate far too heavily on prices and to ascribe to them a causative influence stronger than they possess. Perhaps we are now tending to fall into the opposite mistake of putting too much emphasis on fluctuations in employment. But prices and employment are both, in the most fundamental sense, symptoms rather than causes. We are touching here upon the main theme of the first part of this book ; but for the moment we need to note only that prices and employment rise and fall together. They are the outward signs of the ebb and flow of deeper forces.

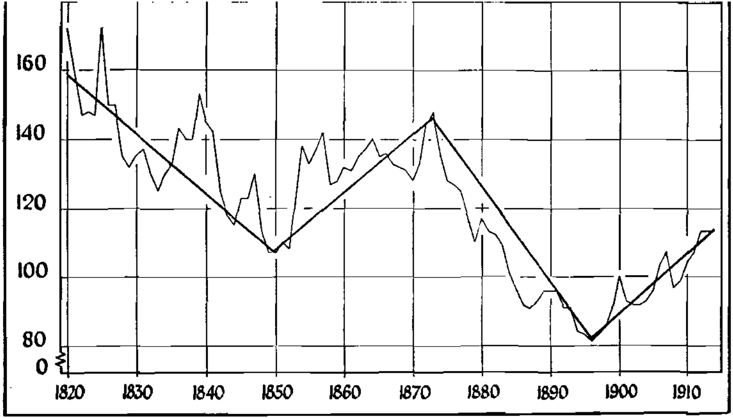
THE TRADE CYCLE

'Ebb and flow' is a correct description of the movements of prices and employment. They do not move in haphazard fluctuations but in cycles of quite considerable regularity. An upward movement of prices and employment over several years is succeeded by a downward movement. When the direction of movement is changed, the new direction almost always continues for a period of years. Moreover, the length of a complete cycle, from peak to peak, is strikingly uniform. It is never less than five years or more than ten, and usually about seven or eight years. No one cycle, it is true, is exactly similar to any other, and there is sufficient variation to make it possible for some people to deny that the movements are truly cyclical (*i.e.* that they obey certain regular rules). But the weight of the evidence is heavily against them. The trade cycle (as it is called) can be

accepted as a natural phenomenon of the economic system.

If the movements of prices over a long period of years—a century or so—are carefully examined, it will be discovered that there are two separate sorts of fluctuations. There is, first of all, the trade cycle which has just been mentioned, with its average length of seven or eight years. But there are also tendencies of much longer duration. At some times, the peak of each successive trade cycle takes the level of prices to a higher point than it reached in the previous cycle. At other times, each peak is lower than the one before. If prices are calculated over the average of the whole cycle, the first sort of period can be called one of rising prices (though there are some years when prices fall) and the second can be called a period of falling prices (though it contains years when prices rise). These periods last for decades. Thus, in the nineteenth century, the years 1820 to 1849 were a period of falling prices in this sense. There followed twenty-five years of a rising tendency, from 1849 to 1874, then twenty-two years of falling prices, from 1874 to 1896, and finally eighteen years of rising prices from 1896 to the outbreak of war in 1914. These movements are shown on the accompanying diagram. The different long-term movements have been distinguished by the addition of straight lines to show the average movement. The short-term fluctuations of the trade cycle, it will be noticed, continue whether the long-term movement is up or down.

The movements of employment and production are not exactly the same as those of prices. So far as the trade cycle is concerned, the two move roughly together, employment falling when prices fall and rising when prices rise. But there are no long periods of twenty years or more in which production steadily falls. On



100 = year 1900.

PRICE LEVEL FLUCTUATIONS DURING THE NINETEENTH CENTURY.

the contrary, production has a steady rising tendency. What does happen is that when the long-term tendency of prices is downwards there tend to be more years of depression and unemployment and fewer years of activity and prosperity than when the long-term tendency of prices is upwards. Some progress is made in either sort of long-term period, but it is more rapid when prices are rising.

There is thus a vital distinction to be made between long-term and short-term fluctuations of prices. Indeed, we might add a third category of even longer-term movements, since throughout the centuries there has been an almost constant tendency for prices to rise, of which some illustrations have been given on page 100. The average of prices in almost every century has been higher than in the preceding century. The chief exception to this generalization is probably the nineteenth century, and if (as we have suggested) a gradual and imperceptible fall in the value of money is necessary to enable the world to slip out of its self-imposed chains of usury, we can add that the nineteenth century was able to avoid this form of communal default only because it was a century of quite unprecedented growth in wealth and population. If the 'real' burden of past indebtedness did not fall in the nineteenth century, the real ability to bear it undoubtedly increased.

So there are really three sets of forces working upon the value of money (*i.e.* the level of prices) at any time. There is, first of all, the age-long tendency of the value of money to fall. Superimposed on that there are periods (discovered in the last century to be rather more than twenty years long) of what we have called long-term fluctuations; a completed long-term cycle (one downward movement and one upward) would thus last about half a century. And thirdly there is the trade cycle

of about seven or eight years. (There are also, of course, the purely haphazard day-to-day movements, but those we can ignore.) Each of these three types of price movement is the most important for some purposes. When, for example, we are talking about the ultimate objectives of monetary policy, we shall do well to remember that the world has almost always in the past found a periodic reduction in the value of money to be necessary. When we are talking about justice between debtors and creditors, wage-earners and profit-makers, it is the 25-year-long tendencies that are important, for the shorter movements reverse themselves very quickly and the age-long tendency is barely perceptible in a man's lifetime.

But for most purposes of practical policy, it is the fluctuations of the trade cycle that are the most important. There are two reasons for this. In the first place, it is the trade cycle that is responsible for the curse of unemployment and all the wastage of potential production and wealth that it represents, and the social disturbances that it brings in its train. And secondly, the longer-term movements are built up on trade cycles. What happens when there is a 25-year period of rising prices is merely that the rising phase of the trade cycle lasts a bit longer and moves a bit faster; when there is a long period of falling prices, the recovery years never quite regain what is lost in the depression years. If we can understand the workings of the trade cycle, we shall have understood the causes of the longer movements. In the next few chapters, then, though we shall not forget the long-term movements, our main attention will be concentrated on the shorter movements of the trade cycle.

The ebb and flow of boom and slump form a continuous process, and the trade cycle can therefore hardly

be said to have a 'beginning.' But the best point at which to break in and start the description of the course of a typical boom is perhaps the bottom of the slump, when prices have reached their lowest and unemployment is at a maximum. Imperceptibly a change in trend arrives ; prices stop falling and begin to rise ; unemployment begins to fall off. Just why the change occurs is a question we shall have to examine at length in later chapters ; we shall have to be content for the moment with the fact that it does arrive. Once the new trend starts, a number of forces tend to reinforce it. The mere fact that prices are rising proves that they have reached and passed their bottom. All the people who have been holding off the market and refraining from replenishing their stocks of goods while the fall lasted now come into the market. These orders give a stimulus to productive industry, and unemployed men are taken on to make the goods for which there is a suddenly increased demand. Falling prices mean falling profits, and the end of the fall increases the confidence of business men and encourages them to spend their accumulated reserves, or even to borrow money, to undertake long-postponed renovations and renewals of their plant and machinery. This gives work to the industries that make buildings and machinery and diminishes unemployment. The men who have got their jobs back have more to spend, and their expenditure creates an increased demand for food and clothes and furniture. Thousands of people who have kept their jobs all through the depression, but have spent as little as possible and saved their money because they were afraid of unemployment, begin to breathe and to spend more freely. They begin to think that perhaps, after all, it would be safe to take that rather larger or more attractive house that they have had their eye on for

some time. In all these ways, demand increases; prices rise and unemployment falls. Soon business men find that it is not merely a question of renewing their existing plant, but extensions are required to cope with the rising demand. So there is still more work for the construction trades and still more expenditure by the men to whom they give jobs. Every new development reinforces the general tendency. Recovery moves cumulatively forward. It is for these reasons that a recovery movement, when it starts, almost always lasts a period of years.

A time eventually comes, however, when recovery has spent itself, when prices stop rising and unemployment stops falling. Just why this happens is, again, a question that we must postpone. But once it has happened, all the forces that have been described in the last paragraph start working in reverse. Because prices are falling, merchants stop buying, hoping to replenish their stocks when prices have fallen a bit lower. This puts men out of work and their smaller incomes lead to another reduction of demand. Falling profits and rising unemployment frighten the business men and the ordinary consumer. Both of them put off all expenditure that is not absolutely necessary. This hits the building and construction trades particularly badly, and their unemployment helps to push the general downward tendency a bit further. So, once again, everything reinforces the governing tendency, and the decline becomes cumulative. Depression, like recovery, acquires a momentum that carries it on for several years without interruption.

As a description of the typical trade cycle, this is summary to the point of inadequacy. But it is not the trade cycle, after all, that is our central theme, but the part that money plays in it. And for our purpose it is more important to point out one or two particular

characteristics of the trade cycle rather than to elaborate the detailed description.

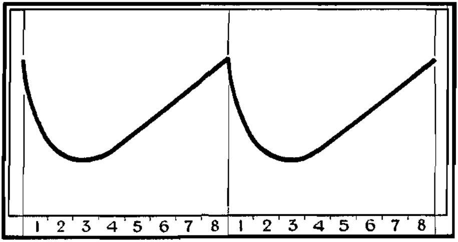
The first point to notice—it is of some importance, as will emerge later—is that although the trade cycle is obviously moved by very strong forces inherent in the economic system, they can on occasion be overruled by human actions. Thus the outbreak of the Great War in 1914 interrupted a trade cycle in full course. The long-term trend of prices was upwards, and the average of an index number of wholesale prices in 1913 was nearly 40 per cent. above the average of 1896—*i.e.* a long-term rise of rather more than 2 per cent. per annum. The trade cycle was also moving up in the years immediately before the war. Unemployment had been heavy (for those days) in 1908 and 1909, but there was an improvement in the next three years and 1913 was one of the very best years on record. In the normal course of events, the trend would have turned some time in 1914 or 1915. But the war completely disrupted the normal course of events. Unemployment vanished and prices increased so rapidly that by the spring of 1920 they were three times as high (measured by a wholesale index number) as in 1913. From that point they slumped until they levelled off in 1922 at about 150 per cent. of the pre-war level. The years from 1914 to 1922 were thus snatched out of the normal alternation of boom and slump. There was, indeed, a war-time boom and a post-war slump, but neither was in the least of the normal character. The tremendous scale of the Government's operations in wartime was clearly sufficient to suspend the operation of the trade cycle.

Something of the same sort seems to be occurring as these lines are being written. A trade cycle came to its normal peak in the summer of 1937 and a slow decline then began. But when the decline was only a year old

it was interrupted by the rearmament programme which was then approaching almost wartime proportions and was beginning to be financed by wartime expedients. In the autumn of 1938 the curves of prices and employment began to move upwards again, and they were pushed still higher a year later by the outbreak of war. We must also take into account the fact that in countries like Nazi Germany and Soviet Russia, where Government control dominates the workings of the economic system and the individual's freedom of action in economic matters has virtually disappeared, the normal working of the trade cycle seems likewise to be suspended. The conclusion to be drawn from these facts would seem to be that although the momentum of the trade cycle pendulum is very strong, it can be suspended by Government action, if that action is on a large enough scale.

The second point to be noted is that the upward and downward phases of the trade cycle are not in every respect similar—the cycle, in other words, is not entirely symmetrical. For example, the downward phase, or depression, is almost always much shorter than the upward phase, or recovery. The downward movement rarely lasts longer than two, or at most three, years, while recovery may last as much as five years. Thus in the last completed cycle in Great Britain the downward phase started in the last quarter of 1929. By the last quarter of 1931 it was virtually over, though the actual bottom was not reached until the summer of 1932. But recovery, which started at this latter date, went on without interruption until well into 1937 (prices reached their peak in March and production in September). There is another difference in the turning-points. Recovery frequently comes to an end with a financial crisis, and always with a sharp and unmistakable change in trend. The point at which the upturn

begins, on the other hand, is not noticeable at the time. The decline slows down and flattens out, and very slowly prices and production begin to move upwards. The typical 'shape' of the trade cycle is thus something like this :



There is still another difference between the two phases which is of considerable importance. The depression is more concentrated than the recovery, not merely in time but also in character. Prices and employment both move down together, and do so rapidly. But in the recovery it is usually possible to distinguish two sub-periods. In the first year or two after recovery starts prices do, indeed, move upwards, but slowly, and the major effect of recovery is to expand the volume of business and production. But towards the end of the recovery period—when it is becoming more difficult to expand production, because the limits of existing capacity are being reached in some lines—prices tend to go ahead more rapidly and are sometimes caught up in a whirl of speculative buying which pushes those of them that are subject to such influences to ridiculous heights.

A third point about the trade cycle may be noted.

We have been speaking, in the last few pages, of 'prices' or 'employment' doing this or that. But it is apparent, from what has been said earlier in the chapter, that all prices do not move together. Wholesale prices move most, retail prices less, wages (the price of labour) still less, and prices fixed by contract not at all. This distortion of the price structure produces the effects that have been described—and then a change in the trade cycle reverses the whole process and produces the opposite distortions. Something similar happens to the production of, and employment provided by, different industries. Some of them are subject to very violent changes, others to very little. It is easy to see why this should be so. A reduction of even as little as 10 per cent. in the output of the food-production industries would be a very serious matter—it would mean that the community was going short of the primary necessity of life. But a complete stoppage of the house-building industry, though ruinous to those in the industry itself, would not be disastrous to the community, which could get on for a year or two with its existing houses. Those industries which make things that the public can put off buying for a year or two inevitably suffer most in a depression. But since all the postponed purchasing has to be done in the few years of prosperity, these same industries do best in boom times. These industries are, in the main, those making durable goods (*i.e.* those goods whose usefulness lasts more than a year or so), and we shall see, in due course, that a most valuable clue to the nature of the trade cycle can be found in this fact that it is the durable goods industries that show the widest fluctuations.

After what has been said in description of the trade cycle, it is hardly necessary to point out what great harm it does to the economic system. The damage done by depressions is obvious enough. On the one hand there

is the misery and shame of unemployment with all the individual poverty and social disturbance that it may create. On the other hand there is the loss of wealth represented by so much wasted and idle labour and capital. The damage done by booms is not quite so obvious. But in a very real sense it is the boom that creates the slump. One illustration of this truth can be drawn from the fact, just mentioned, that the durable goods industries suffer from the most violent fluctuations. Let us suppose that, over a long period of years, the community needs 100,000 houses a year, and that it takes ten men a year to build a house. There is, therefore, permanent employment for 1,000,000 men in the building industry. But, owing to the swings of the trade cycle, the community does not order its houses at the steady rate of 100,000 a year. For three years it orders, say, only 50,000 a year, for three years 100,000, and in the remaining two years of an eight-year cycle 175,000 a year. To provide for these two boom years, the building industry would have to have 1,750,000 men attached to it. But of these 1,750,000 men, 750,000 would be unemployed for six years out of every eight, and a further 500,000 would be out of work for three years out of eight. The average unemployment in this industry over the whole eight years would, in these conditions, be 43 per cent. The less men are attracted into this industry in the boom years, the fewer there will be to be unemployed in bad years. Similarly in other ways the excesses of the boom period bring their retribution in the depression.

It has been said with very great truth that the human race faces three gigantic problems, the solution of any one of which will vastly increase the happiness of mankind, while any one, if it is not solved, may lead to ruin. These three are the problem of abolishing armed conflict between states, the problem of ensuring that enough

human beings are born to keep the race alive, and the problem of removing the trade cycle. The last is not the least.

INFLATION AND DEFLATION

This chapter has been mainly devoted to description. Before we turn to analysis, there are two much used and much abused terms that can usefully be defined. These are 'inflation' and 'deflation.' Nearly every writer puts his own definitions on the terms, with the consequence that much confusion results. For the same reason, no absolute authority can be claimed for the definitions here suggested. But the simplest and most useful definition would seem to be that inflation is a state in which the value of money is falling—*i.e.* prices are rising. Deflation then becomes a state in which the value of money is rising—*i.e.* prices are falling. It should be noted that both terms refer to the movements of prices—that is, they are monetary terms. Inflation, as has been explained, is usually associated with rising activity and employment, and deflation with the reverse. But the association is not absolute. It is possible to have rising activity and employment (for which we may use the term 'recovery') without inflation, and inflation without recovery. Similarly, it is possible to have 'depression,' (the opposite of recovery) without deflation, and deflation without depression—though the separation of these two must be very rare.

In the post-war years, 'inflation' came to have a bad reputation. This was mainly because in some countries, notably Germany, the rise of prices got completely out of hand. Prices rose with staggering rapidity, until at one time they were one million million times the pre-war level. This is 'inflation without recovery' with a vengeance, and, as the peoples of the Continent learned

to their sorrow, it is utterly destructive of all rational Society. Any form of property or income that has a value fixed, or even relatively fixed, in terms of money—bonds, insurance policies, mortgages, pensions, savings, salaries, etc.—loses all its real value overnight. Hundreds of thousands of families in Germany were ruined by the inflation, and the fact that it wiped out the German middle class was undoubtedly one of the chief things that made the Nazi Revolution possible. The horrors of this type of inflation were so great that 'inflation' came for whole nations to be an economic bogy, the name of the one economic phenomenon that must at all costs be avoided. Consequently, to avoid these pejorative associations, the custom has grown up of referring to what happens during the upward phase of the normal trade cycle not as 'inflation' but as 'reflation.' For the present, we can think of 'reflation' *as being restricted to a rise of prices that merely restores* the *status quo ante*—the position before the start of the preceding deflation—and inflation to any further rise in prices after this point. In Chapter V. we shall be able to make a preciser distinction.

CHAPTER IV

THE QUANTITY OF MONEY

THE EQUATION OF EXCHANGE

THE last chapter has been taken up with defining the value of money, describing the fluctuations in its value that regularly occur, and pointing out some of the consequences that flow from these changes. We must now begin the business of analysing the *causes* of changes in the value of money.

The value of anything depends on the relationship between the demand for it and the supply available. Money is an exception only in that changes in its value do not show themselves in fluctuations of any one price but of all prices together. An increase in the demand for money, unaccompanied by any increase in the supply of money, will lead to an enhancement of its value—that is, to a fall in the general price level. Similarly, an increase in the supply of money, without an increase in the demand for it, will lead to a fall in its value—that is, a rise in the general price-level.

So much is fairly obvious. But what is the demand for money, and what is the supply of it? The supply is the easier conception. The supply of money at any one moment is, of course, the total quantity of money in existence at that moment. Money, it should be remembered, was defined in Chapter I. to include not merely coin and banknotes but also anything that is generally acceptable in discharge of monetary obliga-

tions—that is, pre-eminently, bank deposits. For all practical purposes, 'money' can be taken to mean 'coins *plus* banknotes *plus* bank deposits.' (For this purpose, only current account deposits—*i.e.* those on which cheques can be drawn—should be counted.) The supply of money at any one moment, then, can be taken to mean the total amount in existence of these three forms of money. In March 1939 the total of the three varieties in the hands of the public of the United Kingdom (*i.e.* omitting the holdings of the banks themselves) was £454 millions of notes and coins and about £1,300 millions of current account deposits, making a grand total 'supply' of money of about £1,750 millions.

This is the supply of money at any one moment. But when we want to know what is the supply over a period of time—such as, for instance, a year—another factor comes in. Each 'piece' of money is used over and over again. Coins move round with surprising rapidity, not staying in one person's pocket or purse or till for more than a very few days on the average. Banknotes circulate less rapidly, but they too pass through many hands in the course of a year. Bank deposits can be thought of as 'circulating' in the same way, though this requires a little more imagination. But in the year 1930 (to take an example at random) the total payments out of bank accounts made by customers of the banks which were members of the London Clearing House was £64,740,967,000. And since the average amount of current account deposits in the same banks during that year was only £920,800,000, it is obvious that the average pound of deposits had changed hands about seventy times in the course of the year. If we want to know how much money has been used in the course of a year to make payments, the answer is the total amount of money in existence multiplied by the average number

of times it has changed hands in the course of the year. For these cumbrous expressions we may substitute briefer terms. The 'total amount of money in existence' we may call quite simply the 'quantity of money,' and, to secure still greater brevity, we can represent it by the symbol M. The 'average number of times that each piece of money changes hands in the course of a year' we can call the 'velocity of circulation' or V.[1] In this terminology, the supply of money at any moment is M. The supply of money over a year is MV.

Now let us turn to the demand for money. Money is wanted not for itself but in order to perform certain functions—notably to serve as a medium of exchange. That is, it is kept to be handed on. The amount of work that the community wants money to do in the course of a year is, therefore, the number of transactions to be accomplished. In this sense, the 'demand' for money is the tons of coal, the hours of labour, the loaves of bread, and the myriad other things that have to be paid for in the course of a year.

The relation of supply and demand can be put in the form of a very simple equation. When an article is sold it is exchanged for a sum of money. We can say that its price *equals* the sum of money, and if we make a list of all the things that have been sold in the course of a year, it will still be true that the total value of all

[1] Each different kind of money has its own velocity of circulation. Thus the velocity of circulation of current account bank deposits was shown above to have been 70 per annum in 1930. The velocity of circulation of coins is probably higher than this. Moreover, there is no reason why velocity should not be reckoned as so much per day or per month or per decade; but the year is the most convenient period (just as speed is usually reckoned in miles per hour rather than in feet per second). Thus there are many possible ways of defining velocity of circulation, and many of them are useful for particular purposes. But 'the velocity of circulation' without qualification is the number of times that the average 'piece' of money of all kinds changes hands in one year.

those things will equal the sums of money given in exchange. In other words,

Sum of money handed over = total value of goods sold

The sum of money handed over, as we already know, is MV. The total value of the goods sold can similarly be split into two components. It is made up, on the one hand, of the total *quantity* of goods and services (measured in tons, gallons, hours of work, yards, words, etc., etc.), and on the other hand of the prices at which all these things are valued. Thus, if coal were the only sort of thing that were sold, the right-hand side of the equation would be made up of the number of tons of coal sold multiplied by the price per ton. In real life it is made up of the physical volume of trade (a concept easy to imagine though difficult to measure) and of the general price-level. The latter, continuing our algebraic notation, we can call P, and the former we can call T. Our equation has thus become

$$MV = PT$$

This so-called 'equation of exchange' is the most widely known generalization about money in the world.

It is worth noticing what it is and what it is not. It is only another way of writing the obvious fact that the money given in exchange for anything (and therefore for everything) equals the price paid for it. The equation does not tell us anything new about money or prices; it merely restates in a precise and convenient form what is obviously true. In particular, the equation does not profess to show which is cause and which is effect; it merely demonstrates what has happened.

Nevertheless, certain deductions can be made from

it. Let us, for example, suppose that in one year prices are twice as high as in the previous year. The equation tells us that one of three things (or, of course, a combination of the three) must also have happened: either (*a*) the quantity of money must have doubled, or (*b*) the velocity of circulation must have doubled, or (*c*) the physical volume of transactions must have been halved. Now a rise of prices is what happens in the recovery phase of the trade cycle, when there is manifestly not a reduction in the physical volume of transactions. The trade-cycle rise in prices is therefore accompanied either by an increase in the quantity of money or in its velocity of circulation, or both. The equation does not enable us to say which causes which. Similarly, when prices fall, it is not usually due to any increase in the physical volume of trade. On the contrary, most periods of falling prices are periods of slumping trade. So we can conclude that falling prices are associated either with declining quantity of money or with declining velocity of circulation or both—that is, with some change on the money side of the equation.

In the case of the long-period fluctuations of prices, lasting twenty years or more, we can go considerably further in the analysis of cause and effect. Although the volume of trade fluctuates considerably in the course of the trade cycle, it alters only slowly on the average of decades. Similarly, the velocity of circulation, depending as it does on the monetary habits of the people, alters only slowly from one trade cycle to another, even though it varies a lot *within* each trade cycle. Now if neither V nor T varies very violently on the average of long periods, but prices are nevertheless substantially higher or lower on the average of one period than on the average of another, it follows that the movement of P must be associated with a corresponding movement of M. In other

words, on the long-term average, M and P are the significant elements in the equation.

Moreover, we can make a guess about which causes which. In the ninety-six years between 1820 and 1914 there were four well-marked movements of prices, which can be seen in the chart on page 105. Now the supply of money in this whole period was closely based on gold. Gold coins took the place of the present 10s. and £1 notes; banknotes were, accordingly, a much less important part of the total supply of money than to-day, and even such banknotes as existed were rigidly connected with the size of the Bank of England's gold reserve. Bank deposits were also connected with the gold reserve by the mechanism described in Chapter II. The total quantity of money, in fact, was closely determined by the amount of gold in the country.

The four different periods of price movements can be very clearly identified with changes in the supply of gold. In the first period, 1820 to 1849, the volume of business in Great Britain was expanding very rapidly, but no new sources of gold were being discovered. The quantity of gold, which regulated the quantity of money, was *increasing less rapidly* than the volume of transactions. The fall of prices was clearly not causing the shortage of gold; it must have been the shortage of gold that was causing the fall of prices.

This diagnosis would seem to be confirmed by the fact that the turning-point in the trend of prices, the year 1849, was also the year when large gold discoveries in California and Australia were made. For the next twenty-five years the supply of gold was increasing more rapidly than the volume of transactions, and consequently prices rose. After 1873, however, the annual production of gold began to dwindle again. Moreover, a number of

countries, notably Germany and the United States, were either establishing or re-establishing their currencies on the gold standard [1] and acquiring gold for the purpose. This increased competition for gold, combined with a smaller annual production, meant that less could be secured for Great Britain. The total quantity of gold in Great Britain consequently failed to increase as rapidly as the volume of transactions,[2] and prices fell. The turning-point in 1896 once again coincided with the development of the technical processes of extracting gold from ore and the opening up of the enormous goldfield of the South African Rand. Four times as much gold was produced in the eighteen years from 1896 to 1914 as in the fifty years from 1800 to 1850, and in spite of a much increased demand for gold from other parts of the world, the supply in Great Britain increased rapidly. Prices accordingly rose.

The correlation between changes in gold-mining and long-term changes in prices in the nineteenth century is far too close to be dismissed as a coincidence. We can safely say that the changes in the quantity of money in existence (or, more accurately, changes in the rate of increase in the quantity of money relatively to the rate of increase in the volume of business) *caused* the changes in the value of money. It is possible to see not only that this was the causation but to suggest how it was brought about. A long-term movement of prices, as we have seen, is built up of a number of short-term movements. What happens when the long-term trend of prices is upwards is that the recovery phase of the trade

[1] The nature of the gold standard is explained in Chapter IX.

[2] Gold is an almost imperishable material. The quantity available in any year depends therefore only in minor degree on the year's production. But the *increase* in the quantity available is, of course, almost wholly dependent upon the year's production.

cycle lasts longer and goes further, so that each peak of prices is higher than the last. A rise of prices, especially when it is accompanied by an active and increasing volume of business, obviously requires a greater quantity of money.[1] In the rising phase of a trade cycle, the banks will find their customers drawing out larger quantities of notes and coins to pay their expanded wages bills. There will also be an enhanced demand for loans from the banks, which have the double effect of financing business expansion and of creating new deposits. Now if for any reason, such as dependence on an inelastic supply of gold, the quantity of money cannot expand beyond a certain point, that point may well be reached before the recovery has travelled very far. The Central Bank will then be forced to use its two weapons of Bank Rate and Open Market Operations to prevent any further expansion in the quantity of money. This restriction of credit, by making it difficult and expensive to borrow money, will almost always have the effect of halting the process of expansion and turning the tide of prices. Thus an inelastic supply of money achieves its effect by cutting short the upward movement of the trade cycle. This is why, in a period of falling prices, the upward legs of the trade cycle are shorter and less far-reaching than in a period of rising prices. The quantity of money in existence thus seems to be, in the long period, not so much the cause of the level of prices as a limit on prices. It does not cause prices to be what they are so much as it prevents them from being any higher. It can be compared with the governor on a gramophone motor. If the governor is set to 78 revolutions a minute the turntable cannot revolve any faster. But it is the spring, not the governor, that makes

[1] Except to the extent that it is avoided by an increase in the velocity of circulation.

it revolve. If the spring is not wound up, moving the governor to 80 will not help.

This is what makes the equation of exchange of comparatively little assistance in explaining the trade cycle, even though it is, on the whole, a satisfactory explanation of the long-term trends of prices. It is undoubtedly true that a shortage of money has often brought a boom to an end and precipitated the sharp reversal of trend at the top of the trade cycle. But sometimes the boom collapses without any restriction on the supply of money. And it is much more difficult to explain by the Quantity Theory (*i.e.* the theory that it is the quantity of money which is the dominant cause of fluctuations of prices) how the reversal of trend occurs at the bottom of the slump. For if it is a reduction in the quantity of money that causes a downturn of prices, an increase in the quantity of money should suffice to cause an upturn. But there are several examples in the monetary history of the last few years of money having been created in large quantities at the bottom of a slump without any perceptible influence on the level of prices or production.

There are, indeed, some short-term fluctuations that are wholly explainable by the Quantity Theory. Thus the threefold rise in prices during the years of the First German War and immediately after was largely due to the great creation of new money by the Government that took place during the war years. The cost of the war was so great that it exceeded the total of what the Government could raise from the public either by taxation or by the borrowing of the people's savings. The expenditure that remained uncovered in these two ways was met by the creation of new money by the Bank of England and the other banks, the new money being lent to the Government. The volume of transactions was much reduced in wartime conditions, and

there was also a considerable increase in the velocity of circulation, so that a threefold rise in prices was supported by a much smaller increase in the quantity of money. Nevertheless, the increase in the quantity of money was undoubtedly the root cause of the great fall in its value. Similarly, the German inflation of 1923, which was not stopped until the index number of prices reached the incredible figure of 100,000,000,000,000, was manifestly due to the German Government's recourse to the printing press as a means of covering its deficit.

The creation of new money has just been referred to as an alternative to taxation. So it appears to harassed Chancellors of the Exchequer. But in conditions such as prevailed during the war it is in no real way an alternative to taxation. For the rise in prices that follows on the creation of new money compels the public to restrict its consumption just as much as if it had been taxed. Inflation, in fact, subjects the people to 'forced saving,' and the resources set free by the forced saving are handed over to whomever has the first spending of the newly created money—*i.e.* to the Government.[1]

[1] This may be illustrated by a very simple example. Let us suppose that in some miniature community there is a quantity of money in existence of £100 and a velocity of circulation of 12 per annum. The only commodity that is bought or can be bought is coal, of which 600 tons are bought in a year at £2 a ton. Then the equation of exchange is:

$$100 \times 12 = 2 \times 600.$$
$$(M \quad V = P \quad T)$$

Now suppose that the Government, wanting to use more tons of coal than it can get out of the people by taxation or borrowing, creates new money to the extent of £10 in one month. In that month, each unit of the existing £100 is spent (since its velocity of circulation is 12 per annum or 1 per month) and also the Government's new £10. But there are still only 50 tons of coal (the monthly proportion) available. £110 being offered, instead of £100, in competition for 50 tons of coal forces the price up to $\frac{110}{100} \times$ £2, or £2 4s. a ton. The Government will get, at this price, about 4½ tons and the public will have only 45½ tons left. There has been 'forced saving' imposed on the people of 4½ tons of coal. It

Rising prices, as was explained in the last chapter, affect different classes of people differently, so that the weight of the forced saving falls on them unequally; but then so (it might be argued) does taxation. (Deflation, of course, has the opposite effect to inflation: it causes the public to be able to buy with its income more than was previously possible.) When the object of a creation of money is to enable the Government to get hold of resources that it cannot secure by taxation and borrowing, this forced saving becomes the essential purpose of the whole scheme; and, consequently, this form of money-creation must continue until the necessary degree of forced saving has been imposed. We can therefore say that if the creation of new money for the Government to spend is carried far enough, it will always initiate a rise in prices. But the deficit required for this purpose may well be of heroic proportions. The American Federal Government has had an average deficit in the last few years of several hundred million pounds without succeeding in driving the price-level up to its pre-depression figure. And the mere creation of money, without any arrangement by the Government to spend it, may merely result in the new money standing idle.

The Quantity Theory is, therefore, at best an imperfect guide to the causes of the trade cycle. Shortage of money may cause the recovery to turn into depression. But it is not the sole cause, and depressions may begin when there is no shortage of money. Similarly, it is open to a Government to start a reflation or an inflation by the heroic step of creating enormous quantities of money. But lesser measures of money-creation may be quite impotent.

should be noted for future reference that this result will follow only if it is impossible to produce any more coal. If the producers of coal, noticing that there was £110 being offered for their coal instead of the usual £100, had been able to produce 55 tons in a month instead of the previous 50 tons, the price would stay at £2 a ton.

Thus in 1936, not only was the American Government running a deficit of over £800 millions, but the reserves (the 'cash') of the Member Banks were more than twice as large as they had been in 1929 before the depression, but the public refused to use the plethora of money offered to it, and both prices and employment stayed obstinately below the 1929 levels. Indeed, the more money the American authorities created, the lower became the velocity of circulation. They could increase M, but not MV.

So the most we can say for the Quantity Theory is that the quantity of money in existence seems to be the dominant influence on the price-level on the average of long periods. But in the short period of the trade cycle, it may or may not control the movements of prices. And whether it does or does not depends on whether changes in the quantity of money are offset by changes in the velocity of its circulation.

THE VELOCITY OF CIRCULATION

Another method of approach enables us to shed a little more light on this puzzling phenomenon of the velocity of circulation of money by investigating rather more closely the nature of the demand for money. In the equation MV=PT we have, indeed, related the supply of money, in one sense, to the demand for it, in one sense. But on an earlier page we have distinguished two characteristics of money—flatness and roundness—corresponding to two of the primary functions of money, to serve as a store of value and as a medium of exchange. In the one use money piles up, in the other it runs round. Now the analysis that results in the equation of exchange is clearly concerned only with round money; it deals with its circulation and the transactions it facilitates in the course of a year.

But what about flat money—money as a store of value? How does it acquire its value, and how can we measure the demand for it?

To answer these questions we must go back to the fact, which has been insisted on many times in these pages, that money is useless in itself and wanted only because it can be exchanged for any other form of material wealth. It follows from this (perhaps paradoxically at first sight) that the ownership of money involves a sacrifice to its owner. Whoever has £100 has something that is useless in itself, whereas he might have had £100 worth of useful and pleasant objects instead. The original acquisition of a holding of money involves a positive sacrifice, since money can only be stored up by spending less than one's income. The continued holding of money involves a negative sacrifice in refraining from buying the things that money can buy. Every one must therefore strike a balance in his own mind between the convenience and security represented by having a stock of money on hand and the sacrifice of real consumption that the holding of such a stock involves. To have too little money may mean inconvenience or insecurity; to have too much may require quite unnecessary stinting. Somewhere between the two extremes every person, every family, every community fixes the amount of money it will keep. It is convenient to think of this amount as a given proportion of the person's or the family's or the community's annual income. A family with an income of £3 a week has an annual income of £156. It may very well happen that such a family has spent every penny of its income each week by the time pay-day comes round. In that case its average holding of money will be £1½ or $\frac{1}{104}$ of its annual income. But most families have a little store of money in the savings bank

or the stocking. Let us suppose that our £3-a-week family, though it spent every penny of its weekly income, nevertheless had a reserve of £10. Then its average holding of money would be £11 10s., or about $\frac{1}{13\frac{1}{2}}$ of its annual income. Richer people may keep higher proportions. Thus a man with an income of £1,000 a year might well have a balance of £200 at the bank—in other words, he finds it worth while to keep ⅕ of his annual income in money, even though the money brings him no return. But other rich men, having other forms of property that they could easily turn into money in case of need, such as gilt-edged securities, may prefer to keep very little money. One millionaire was in the habit of declaring that he could not remember a time when his bank account had not been overdrawn. But whatever the proportion may be for any individual, it is always the result of a conscious or an unconscious decision; none of us has the money holding we have quite by accident. This is, in the most real sense, the demand for money.

Millions of individual decisions add up to a communal decision. There is, at any one time, a proportion of its total annual income that the community chooses to hold in money. Figures can be quoted to give an approximate idea of what this proportion is. At the time these lines are written (spring 1939) the National Income of the United Kingdom is something of the order of £5,000 millions. If we count in the coins, notes, and bank deposits [1] and exclude all forms of money that are

[1] Whether deposit accounts, on which cheques cannot be drawn, should be included as well as current accounts is always a troublesome question. Since we are here dealing with money as a store of value, it would seem more logical to include them, even though we excluded them on page 118 when we were dealing with circulating money. If they were excluded the total of money would be reduced by about £1,000 millions, and the proportion would become more like one-third than one-half.

merely held as reserves against other forms of money (such as the banks' till money), the total of money comes to about £2,750 millions. The proportion of its annual income that the community chooses to keep in money is therefore—if these definitions are correct—just over one-half. (This does not mean, of course, that the community refrains each year from consuming half its income in order to keep it in monetary form, but merely that the store of money that has been accumulated over the years is now worth half one year's income.)

If the community has decided to keep a store of money equal to half its annual income, the actual quantity of money in existence will have that value, and each unit of money will have its proportionate value. To revert to a simplified example that has been used earlier, if the annual real income of the community is 1,000 tons of coal and it decides to have a money stock equal to half its annual real income, the whole quantity of money will be worth 500 tons of coal. If, further, the quantity of money consists of 1,000 £1 notes, then £1 will be worth half a ton of coal, and the price of coal will be £2 a ton. For those who like algebra, this explanation of the value of money can be put into a formal equation. Let us write R for the income of the community in a year (we write R and not I to emphasize that it is the *real* income that matters—*i.e.* in tons and gallons and bushels, not in money terms). Let us write k for the proportion of its income that the community chooses to hold in money. kR will then be the value of the total quantity of money. M, as before, means the number of units of money (*i.e.* the number of pounds) in existence. Then $\frac{kR}{M}$ is the value of £1. The value of one unit of money, it should be remembered, is the opposite of the price-level; when prices move up the value of

money moves down, and vice versa. To bring p, the price level,[1] into the picture we must therefore turn upside down the value of £1. Thus we get the final equation :

$$p = \frac{M}{kR}$$

Let us turn this equation into still another form and set it alongside the previous equation of exchange. Here they are :

$$MV = PT \qquad \frac{M}{k} = pR$$

This similarity is partly deceptive. It has been pointed out in the last footnote that p is not the same thing as P. And R is obviously not the same thing as T. But p and P will tend to move up and down together (though not necessarily at the same speed) ; so will R and T. The juxtaposition of the two equations does bring out that V and k tend to be the opposites of each other. The higher the proportion of their real incomes that people decide to keep in money, the lower will be the velocity of circulation of money, and vice versa. If, then, we want to investigate the causes of the puzzling and damaging fluctuations in velocity, we should turn to the causes that determine changes in the factor k. Why do people want to hold a larger value in store in the form of money at some times than at others ?

When the question is put in this form, the answer is almost self-evident. Depression times are times when all other values are falling. Securities fall day by day

[1] We must use the small letter p to show that this is a different price-level from the previous one. Then we were concerned with the prices of everything that enters into a transaction that is settled with money. Now we are concerned only with the prices of those things that form part of the community's real income—*i.e.* the things that men and women buy to consume, or to use, or to enjoy, and not those things that they buy to sell again or to help them make things to consume.

on the Stock Exchange, the lack of demand causes a slump in the values of land and houses, even jewellery and works of fine art lose in value. The only thing whose value is rising is money. The real burden of debt is rising, as is the real advantage of being a creditor. It is, therefore, pre-eminently a time when everybody tries to get out of debt and have a credit balance. Moreover, since depressions are times of insecurity, not only do people try to increase their holdings of money by saving out of their incomes, but even those people who have ample accumulations in more or less fixed form (*e.g.* houses, land, securities) try to convert them into money, which has a high 'liquidity' (*i.e.* it can be used immediately at any time). To hold money brings in no interest or dividends, but in times of depression it may be more valuable to preserve capital intact.

In times of boom, on the other hand, money is a poor thing to have. Many other varieties of wealth are rising in value, money alone is falling. To use one's money to buy, say, securities or land or a share in a business, is not only to secure a return on it, but to stand a good chance of the principal rising in value also. Borrowed money can easily be employed to yield a return greater than the interest that has to be paid for a loan. When prices are rising, in short, there are few attractions in holding money, and the proportion of its income that the community is prepared to hold in money falls. If the inflation goes to extremes, k may fall to a very small figure. Thus in the great German inflation of 1923, when prices were rising a hundredfold in a day, when any money that was kept even overnight lost the largest part of its value—when, in short, money was just about as bad a store of value as could be imagined—the real value of the total stock of money in Germany

fell to only one-seventh of the normal level. That it did not fall even lower shows to what extent money is indispensable in its other functions, as a unit of account and a medium of exchange, even when it is of no more use as a store of value than a sieve is as a store of water.

This alternative method of analysis thus takes us one or two steps nearer to reality. It explains why money has any value at all—because people find it useful enough to be worth sacrificing something for. And as an explanation of what happens in a trade cycle, it is much more convincing to say that the value of money varies because people have a varying use for it than merely to ascribe it to changes in the velocity of circulation.

But still it is not a very satisfactory explanation of the *cause* of the fluctuations of the trade cycle. It explains why it is that, once the value of money starts rising, people want money more, so that the value goes on rising. But it does not explain how the value of money ever starts rising. Most depressions begin, not with a sudden contraction in the volume of money, but with a sudden fall in the velocity of circulation (=increase in the public's preference for money). What causes this? Either of our two equations suggest what might be a cure. For if V suddenly falls, M could be increased to compensate. In other words, if the public suddenly puts a higher value on its total stock of money, let that stock be increased, so that each unit of it will have the same value. But practical experiments along these lines have not been very successful. In America and in France in recent years there have been times when the more money was created, the more the public seemed to want. And in any case, this sort of cure would be rather unintelligent. When a man has a sudden rise in temperature, he can be cooled down by encasing him in ice. But it is much

better to find out why he got the fever. Similarly, even though it were possible to counteract any movements in V or in *k* by manipulating M, to do so blindly might be dangerous economic quackery.

LIMITS OF THE QUANTITY THEORY

The Quantity Theory (by which either of the two approaches, resulting in the two equations, can be understood) can thus explain the 'How it works' of fluctuations in the value of money and in the activity of industry. But it cannot explain the 'Why it works,' except in the long-period, and in those exceptional short-period fluctuations that are manifestly due to large-scale creations or contractions of money. It cannot even explain why it is that a creation of money will sometimes 'take' and start off a rise in prices, while at another time an equal creation may have no effect at all. Moreover, the practical conclusion toward which this analysis would seem to be leading—the prescription emerging from this diagnosis—has been shown by experience to be of limited and variable effect. The obvious practical application of a Quantity Theory is that the value of money should be managed by manipulating the quantity of it in existence. There are a number of cases on record in which a restriction of the quantity of money, or even a refusal to allow it to expand, has brought about a fall in prices. But there are also many cases in which the monetary authorities have offered to the public a very greatly increased supply of money with the object of inducing a rise in prices, and have found no takers. The horse can evidently be stopped from drinking, but no amount of leading him to the water will make him drink if he is not thirsty.

The modern tendency in economic thinking, in fact, is to discard the old notion of the quantity of money as a causative factor in the state of business and a determinant of the value of money and to regard it as a consequence. Something else sets the pace of events and the quantity of money accommodates itself to it. The simile of the governor on a gramophone motor is, in fact, an exact one. The quantity of money may serve to limit the upward movement of prices, and by that means it has an influence on the long-term value of money. But in the shorter period of the trade cycle, it is not the governor but the mainspring that is dominant.

We must go in search of that mainspring. And we shall find a clue for our search in the observation that what is lacking in a time of depression is not so much *money* as *incomes*. It is easy to establish that there is often as much money in existence at the bottom of a slump as there was at the height of the preceding boom—and if there has been some reduction in the quantity of bank deposits, the reason is not to be found in any unwillingness of the banks to create money but in an unwillingness of the public to request the creation of money by borrowing from the banks. What is manifestly lower at the bottom of a slump than at the top of a boom is not the quantity of money but the total of individual incomes. If people had the incomes, they would use the supply of money actually and potentially in existence ; the velocity of circulation would increase and prices would rise. It is because money is not paid out in incomes that it languishes in stagnant pools.

The value of money, in fact, is a consequence of the total of incomes rather than of the quantity of money. It is the causes of fluctuations in the total of incomes of which we must go in search.

Chapter V

SAVING AND CAPITAL

MONEY AND INCOME

AS a method of explaining monetary events, the Quantity Theory, even in the more refined forms that have been discussed in the last two chapters, suffers from two defects. In the first place, as we have seen, the emphasis it lays upon the quantity of money, as if that were the sole, or even the main, source of economic change, can be gravely misleading—especially in connection with those short-run fluctuations of prices and production which excite the most controversy and do the most damage. Indeed, we reached the point at the end of the previous chapter of suggesting that the Quantity Theory might be relegated to the position of explaining the longer secular movements in the average price-level, while some other explanation was sought for the shorter and more violent swings of the Trade Cycle.

The second defect of the Quantity Theory is that it concentrates too much attention upon the level of prices, as if changes in prices were the most critical and important phenomenon of the economic system. It is perfectly true, as has been amply argued earlier, that changes in the price-level can have very far-reaching and disturbing consequences. In particular, there are ways in which price movements can induce changes in the volume of production—that is, in the creation of wealth. Rising

prices set up influences that lead to increased activity, falling prices lead to falling activity. The defect of the Quantity Theory—or, more accurately, of the school of thought whose main weapon of analysis it is—is that it takes these undeniable truths and, jumping a step in the logic, proceeds to the assumption that all changes in the general level of business activity are the product of changes in the price-level—in short, that price fluctuations are the cause of the Trade Cycle.

Now this is manifestly not true, and if one of the two must be labelled cause and the other effect, then it is the Trade Cycle that is the cause and the level of prices that is the effect. It is bad trade that causes low prices, as every business man knows, not low prices that cause a low level of trade. But it would in reality be much nearer the truth to say that both bad trade and low prices are equally the consequences of some common cause. A moment's reflection will show that this is so. Prices do not move of their own volition ; they do not fall unless somebody puts them down. And the reason for putting a price down is that the demand for the particular article in question is smaller than the supply. In a free market, where buyers and sellers freely haggle with each other, prices automatically and immediately follow the fluctuations of demand and supply in relation to each other. In other cases, where the manufacturer fixes the price at which his goods will be sold, the only reason for lowering the price is in the hope of selling more. In either case, the reason for falling prices is a lack of demand. The same cause may produce a slightly different result. In the Great Depression of the early 1930's, as has already been mentioned, agriculture reacted to the lack of demand by a severe fall of prices. The volume of produce being grown and sold was no smaller, on the average, at the bottom of the depression

than at the height of the boom, but the incomes of the farmers were much smaller. In many forms of industry, on the other hand, prices were maintained in the face of falling demand, with the result that the volume of goods produced became very much less than it had been. The industrial worker in, say, 1932 could earn almost as much in money—and much more in real terms—for an hour's work as in 1929, but he could get many fewer hours' work. Thus the farmer and the industrialist suffered equally, though in different ways, and the cause of their suffering was the same : a lack of demand for their products. The fall in prices was only the mechanism by which agriculture adjusted itself to the fall in demand ; it was in no sense the cause of the depression.

The fundamental fact to which any theory of money must adjust itself is that there are times when the demand for goods and services of all sorts becomes considerably less than the supply of them. At these times the world seems unable to buy as many goods and services as it can produce. And conversely there are times (though more rarely) when the demand for goods of all sorts exceeds the supply of them, when the world is trying to buy more than it can produce, when there are more or less severe shortages of everything, especially of labour. At the moment when these lines are written, it seems almost superfluous to point out that war produces conditions of this second variety.

It is possible to imagine circumstances in which a general shortage of demand might be caused by a reduction in the supply of money. Most money comes into existence, as was explained in Chapter II., in the process of being lent to borrowers, and if all this debt-born money were to be withdrawn by the banking system, the public would be so hard-pressed to repay its debts that it would have very little left over for the purchase of

goods and services. Thus the destruction of money may lead to a restriction of demand, and a creation of money may, conversely, lead to an excess of demand. But in actual fact it is rarely that this sequence of cause-and-effect is carried out. The onset of the Great Depression in 1929–30, for example, was not accompanied by any significant reduction in the quantity of money. Indeed, in many countries, the supply of money was greater in 1932 than it had been in 1929. And similarly, the first phases of recovery were not accompanied by any great creation of new supplies of money but by a more active utilization of the supplies already in existence.

The only conclusion that it is reasonable to come to on the basis of the evidence is that the sudden lack of demand which causes a depression is due less to a lack of *money* than to a lack of *income*. It might be more accurate to say that it is due to a lack of *spending* ; but we know that, in a depression, the reason why people do not spend more money is, in ninety-nine cases out of a hundred, not unwillingness to spend income in hand, but sheer lack of income.

To get any further in explaining the process by which money and production act and interact on each other, we shall, accordingly, have to discover why the income of the community varies up and down much more violently than the community's technical ability to produce wealth, so that the income is sometimes more than enough, and oftener insufficient, to buy the goods and services the community can produce. And in our search for the cause of these fluctuations, though we shall bear in mind that sudden shortages or super-abundances in the quantity of money *may* cause fluctuations in income, we shall find that the quantity of money is more often a consequence than a cause of the level of incomes.

CURRENT GOODS AND DURABLE GOODS

There is one respect in which the various algebraic equations of the Quantity Theory are supremely useful: they emphasize the fact that the whole of economic activity is an exchange of money for goods and services and that the two sides of the equation must at all times be equal. The clue to the modern theory of money can be gained by examining a slightly different form of equality between money and expenditure, regarding money not so much as the quantity of units in existence but in its more fundamental function as the vehicle of income.

There is a fundamental equality, in this sense, between income and expenditure. Every one of us receives his income from one or more persons, to whom that income is an item of expenditure. Thus, if a clerk employed by the Government has an income of £200 a year, that £200 is income to him, but part of the expenditure of the department in which he is employed. The Government, in its turn, has to raise the £200 by taxation (or borrowing), and in this stage it appears as income to the Government and expenditure to the taxpayer (or borrower). Similarly, if we start from the clerk and move in the other direction: the money he spends on rent or food or clothes is expenditure to him, but income to his landlord, his grocer, and his tailor. The only source of income is in somebody else's expenditure, and every expenditure creates somebody else's income.[1] It would be possible to express this in the form of an equation, all

[1] Perhaps it is as well to make the reservation that the word 'income' is not here being confined to that one of its meanings in which it is distinguished from 'capital.'

the incomes of the community equalling the total of its expenditures. But it is perhaps more enlightening to conceive of it as a gigantic circular flow of incomes, each expenditure creating some income, which is again spent and creates another income, and so forth right round the circle.

At this point we must draw a vitally important distinction between two categories of the goods and services of which the real income of the community consists. Every year the community produces a certain total of goods and services; some of them are for immediate consumption, the rest are goods whose value will last beyond the immediate present. These two categories can be called current goods and durable goods. All services are naturally current goods, since they must be consumed at the moment they are rendered: you cannot store the services of a parlourmaid for a year or even for a day. But tangible goods can be of either kind. A loaf of bread that goes stale, a newspaper that loses its interest, a shirt that wears out—these are examples of current goods. A house that renders its service of shelter for decades or centuries, jewellery that is as valuable years after it is bought as now, a loom or a lathe that can be used for years to make other goods, the factory in which it is stored, the roads and railways over which goods are carried—all these are durable goods. The distinction between the two categories is a perfectly clear one; but the precise boundary between them may be difficult to fix. Where, for example, are we to place a motor car, which has a useful working life of seven to ten years—or even a suit of clothes, which may last for three or four years? Are they current or durable? Perhaps the best dividing-line is the duration of one year; anything which retains the greater part of its value one year after it was produced can be counted

as a durable good, all others are current goods.[1] Another way of saying the same thing is that expenditure on durable goods is that part of the community's total expenditure which has the effect of making the community richer a year later—*i.e.* which increases the community's assets—while expenditure on current goods is absorbed in keeping the community going.

The total of the incomes of the community can be divided into two categories according as they are earned by producing current goods and services or by producing durable goods. A similar distinction can be drawn between the different ways in which the community's income is disposed of—but it is not exactly the same distinction, and the rest of this chapter turns on the vital difference. The disposal of incomes can be divided into Consumption and Saving. Consumption presents no difficulties—it is merely the expenditure of income on current goods. It includes, of course, not merely the current goods that the individual family consumes, such as food, but also the current goods consumed by industry, such as raw cotton and other materials.

A man's saving is that part of his income that is not spent on consumption goods. The important thing to note about this definition is that saving is *not* that part of a man's income which he spends on durable goods. There are, in fact, a variety of things that a man can do with his savings, and spending money on durable goods is only one of them. If a man saves £1,000 out of his income in any particular year and spends it on a house, then he has both saved and used his savings to buy a

[1] A further difficulty is created by things which, although usually consumed within a year, would retain their usefulness if they were stored, such as coal. Are we to count coal as a current good because it is nearly always consumed in less than a year, or as a durable good because it could be kept for longer? The balance of convenience seems to dictate the former.

durable good. But this way of using savings is the exception rather than the rule. Savings may simply be hoarded in the form of cash. Or they may be used to make a loan, to buy stocks and shares, or to acquire other forms of claims on other people. In a modern community, most of the citizens' savings are not spent by them on durable goods.

This explains why, of all the possible distinctions between different kinds of expenditure, this particular one has been chosen—because it bears directly on the functions of money. In the case of current goods, the chain between the producer and the consumer is direct and immediate. With very small exceptions, only those current goods are made that are demanded by consumers, and the consumer's payment goes straight back, through the chain of middlemen, to the various producers who have collaborated in the production. Money is acting simply as a medium of exchange. When a baker uses his wages to buy meat, the money is merely serving as a convenient intermediary in the barter of bread for meat.

But in the case of savings and durable goods, money has the additional function of a store of value. The people who do the community's saving are not the same as those who buy its durable goods, and the connection between them is indirect and remote. There is no guarantee that the amount of saving that individual citizens make up their minds to do is the same as the value of the durable goods that an entirely different set of people make up their minds to buy. Indeed, it would be a pure coincidence if the two were the same. When a baker decides to bake some bread he is deliberately estimating how much bread his customers will want to buy, and if he is an experienced tradesman his estimate will be just about correct. At least he is attempting to forecast, and adjust his own action to, the

actions of consumers. Not so with the process of saving and producing durable goods. The man who builds a house for letting is estimating whether there will be people in future years who will be willing to offer an adequate rent [1]; he is not thinking whether anybody is saving enough money to pay for the house while it is being built. Similarly with those who build factories; their minds are on the consumers of the future, not the savers of the present. The man who saves £100 of his income does not bother his head about whether somebody else is producing £100 worth of durable goods. If he hoards his saving in cash, his action has no influence at all on the willingness of business men to produce durable goods. Even if he uses his £100 to buy stocks and shares, the securities he buys are probably those of companies already in existence. Only if his £100 goes to buy stock in a newly formed company which is raising fresh capital to be put into bricks and mortar and machines is his saving going direct to the purchase of durable goods. A large part of saving nowadays is done by limited companies, who put part of their earnings into their reserve funds instead of distributing them in dividends to their shareholders; extensions of capital equipment are then paid for out of these reserve funds. But though, in these cases, the persons who save and the persons who order the durable goods are the same, the two actions take place at different times.

CAPITAL AND DEBT

Money thus plays a significantly different part in the savings-durable goods nexus than in the consumption-

[1] Rent is, of course, a current expense. It does not pay for the house (the tenant owns no portion of the house however long he pays rent) but for the landlord's service in permitting the tenant to occupy it.

current goods one ; it serves not merely as a medium of exchange but also as a store of value. The man who saves £100 puts his savings into the form of money or of a money-claim (like a debt), not only as a convenient way of getting over the barter difficulty in acquiring a durable good. He may put it into a money form in order to keep the value of his saving until he is ready to buy a durable good (as when a man accumulates savings until he has enough to build a house). Or he may have no intention of buying durable goods now or in the future; he may merely want to set money by for his old age, when he will spend it all on current goods.

The significant thing about all these different forms of monetary saving is that money is being asked to do what may not be really possible. Take the last case, of the man who is saving for his old age : what he is really doing is refraining from consuming current goods now when he could afford them (*i.e.* when he is himself producing enough to give in barter for them) in order to be able to consume current goods later when he will himself be producing nothing. If there were no money in the world, the only way he could achieve this object would be to lay up a store of current goods during his working life, and draw on them in his old age, as a squirrel stores up acorns for the winter. But this is impossible, for current goods do not last. So money is being asked to do the impossible. Let us imagine a community in which there has never been any saving or any production of durable goods. The whole of economic activity consists in the production and consumption of current goods. Now in a certain year let us suppose that A, setting a precedent, saves £100 and hoards it in notes. His hoard will entitle him, in the next year, to lay claim to £100 of goods, current or

durable, more than he will be producing at that time. If nothing else happens, the spending of that £100 by A in the second year will mean a demand for £100 worth of goods more than the community will then be able to supply; A will get his extra goods only by forcing others to consume less than they produce.

But the impossible becomes possible when we take into account the activities of the durable goods producers. Durable goods are, by definition, those which keep their value. Suppose that in the year that A did his saving of £100, B had produced £100 of durable goods. The community would then be £100 richer than it had been, and when, next year, A drew his £100 out of hoard the total supply of goods for sale in the community would be that year's production *plus* £100—the same as the money being offered. A would get the benefit of his thrift without penalizing the rest of the community.

When money is used as a store of value there is thus a potential contradiction between what the community thinks it is doing and what it is really doing. To an individual, a hoard of money, or an accumulation of money claims on other individuals, represents real wealth, because the money or the money claims can be turned into real goods which he can use or consume. It is a matter of comparative indifference to him whether his wealth is in money, money claims, or goods—in fact, money and money claims have certain advantages of security, convenience, and adaptability over real goods. But money, as we have emphasized over and over again, has no value at all. A community whose citizens have set aside part of their efforts to create real things of lasting value is richer than one whose citizens have merely accumulated pieces of paper, even though the individual efforts of abstinence have been as great in the second case as in the first. Money, after all, is only

a claim on the community, and no community can enrich itself by stacking up its own I O U 's.

Individuals can save in money, the community of individuals cannot. And since the parts cannot be greater than the whole, it follows that saving-in-money that is not accompanied by saving-in-goods is merely thrown away. Not only is it thrown away, it stores up trouble for the future. For the individuals who have done the saving have their money or their money claims, which are enforceable against the community, even though the rest of the community is penalized by the exercise of them. This is the distinction between capital and debt, between interest and usury. The only way in which the community can enrich itself and the standard of living of its members can be raised is by the accumulation of capital—that is, of useful durable goods—which are paid for by saving. Yet throughout economic history, every period when individual saving-in-money has not been accompanied by collective saving-in-goods has left behind it a legacy of deadweight debt, from which the community has been able to escape only by lowering the value of money, and therefore of money-debts. This is one of the explanations of the fact that there seems to be a steady rising tendency in the price-level which has persisted for as long as we have any records. In a proximate sense, this has been due to the steadily increasing quantity of the precious metals, which have served either as money or as the base for money. But the social need for rising prices has been the burden of indebtedness left behind by frustrated saving, and if gold and silver had not performed this service for the community, it would have been forced long ago to find some more convenient money.

MONETARY DEMAND

Debt and usury are not, however, the most important consequences of a failure of saving-in-money to be embodied in the tangible form of saving-in-goods. Unemployment and the other phenomena of the trade cycle can also be shown to come from the same source. To show how this comes about, we must trace out in greater detail the consequence of any discrepancy between saving-in-money and saving-in-goods. (Henceforward we will use the conventional terminology, calling saving-in-money Saving and saving-in-goods Investment. Investment must always have its capital letter to show that it is being used in this special sense of saving-in-goods and not in the usual sense, in which it may mean merely the use of money to purchase a money-claim, such as a bond or a share.)

To clarify our examples, let us assume a community with a total income of £1,000 millions a year. Out of this sum, £900 millions is spent on current goods and £100 millions is saved. Durable goods to the value of £100 millions are also produced every year. Saving and Investment are therefore equal at £100 millions.

Now suppose that, for some reason or other, the community suddenly starts to save £200 millions a year. The first consequence is, obviously, to cut down the expenditure on current goods to £800 millions a year—that is, there is a reduction in the demand for current goods. But there is no reason why the demand for durable goods should rise to absorb the missing £100 millions. True, the community is saving an extra £100 millions which *could* be used to buy durable goods. But there is no reason why it should be so used ; on the contrary, as has been pointed out, those who do the saving only rarely buy durable goods with the money

they have saved. The business men who do the buying of durable goods (builders, factory owners, etc.) are guided not by the volume of Saving being done in the present but by their estimate of the volume of consumption in the future, and when they see expenditure on current goods falling from £900 millions to £800 millions, with the consequent distress and unemployment in the current goods industries, they are less inclined, not more, to build new houses or factories. Consequently, although the increase in Saving ought to result in an increase of Investment—in fact, must have that result if it is going to make sense—it is more likely, in fact, through the interposition of money, to have the contrary effect. Thus the demand for current goods and the demand for durable goods will both tend to fall off at the same time. There will be a reduced demand for all goods, and the community will discover that it has got into one of those recurrent moods in which it seems to be unable, or unwilling, to buy all the goods it can make. The lack of demand will lead to unemployment and falling prices—in short, the Trade Cycle will start its downward swing.

These are the consequences of a sudden increase in the community's desire to save, producing a discrepancy between Saving and Investment. The same discrepancy could be produced not by an increase in Saving but by a reduction in Investment—*i.e.* if business men for any reason stopped building houses, factories, etc. Let us go back to our community, with its income of £1,000 millions and its Saving and Investment of £100 millions each, and suppose that the production of durable goods suddenly goes down to nothing. What happens then?

The first reaction, obviously, is widespread unemployment in the industries producing durable goods. One-tenth of the inhabitants of the community will find

themselves without an income. Naturally, they will spend less on current goods. Indeed, if they had no savings to draw on, if there was no unemployment insurance, and no charity, they would not be able to spend anything at all on current goods. But this in turn would reduce the incomes of the current goods producers and they would start reducing their expenditure on each other's products. Now, if the community suddenly stops making durable goods, the correct reaction should be to stop saving. But owing to the interposition of money, the only way in which saving can be reduced is by pushing the general depression of trade so far that everybody becomes too poor to do any saving.

Thus an excess of Saving over Investment, whether it is produced by an increase of Saving or by a decline in Investment, can produce the chief phenomenon of a depression—namely, a failure of demand for all classes of goods. We must now examine the other side of the medal. What happens when there is an excess of Investment over Saving?

Let us take first the case of an increase in the volume of Investment. Business men begin to place more orders for durable goods. This means an increase in the incomes of the producers of durable goods, who spend more money on current goods. And since more money is being spent on current goods, business men are encouraged to increase still further their orders for durable goods. It is when consumers are spending plenty of money on consumption—not when they are saving most—that the building of houses seems most profitable. It is when the sales of bread are at their height that orders are placed for new ovens. So an increase in Investment directly increases the demand for durable goods, which has the effect of increasing the demand for current goods, which, in its turn, stimu-

lates a further increase in the demand for durable goods.

So the cumulative process of recovery begins. But here we must introduce a distinction between two different kinds of recovery. If it really is 'recovery'—that is, if a depression has gone before—then there will be, at the start of the process, a large number of unemployed standing idle, factories closed or working at half-pressure, and so on. If, in these circumstances, there is an increase in general demand of the nature that has just been described, the first effect will be to provide work for the idle labour and capital. The community's production of goods and services will increase at the same rate as the demand for them. In these circumstances, then, there is no reason why there should be any general rise in prices. There probably will be some rise; it is not possible to increase the production of everything when the demand for it increases—this is particularly true of agricultural products—and if so, the impact of increased demand will raise prices. But in general, and especially in industrial countries, the first phase of recovery is one of falling unemployment rather than of rising prices.

Gradually, however, as recovery proceeds and demand goes on increasing, the available supply of one thing after another runs out. The community arrives at the stage of 'full employment.'[1] If demand goes on

[1] 'Full employment' does not necessarily mean that every man and woman has a job. It means only that there are no more supplies of idle labour or idle capital *of the sorts that are actually being demanded*. Thus it is quite possible to have 'full employment' and still have 1,000,000 persons on the unemployment register. They may be coal miners, when what is needed are engineers. Or there may not be any idle factories for them to work in. 'Full employment' is reached whenever, for any reason, the production of the goods for which there is an increasing demand has reached a maximum.

increasing, then an increasing amount of money will be offered in exchange for a stationary supply of goods and services. The inevitable result will be an all-round tendency towards higher wages and prices. This has a corollary that is interesting for the theory of money. So long as the increase in demand has the effect of bringing unemployed resources of labour and capital into use, without any very significant rise in prices, saving will increase, for when people's incomes increase, the amount of saving they do likewise increases. Thus, during the earlier phase of recovery, Saving and Investment are chasing each other upwards—Investment, of course, keeping its lead (otherwise the process would stop). But if Investment continues to increase after the stage of Full Employment is reached, a change occurs. The rise in prices compels the people to cut down their consumption, since they can buy less with their incomes. It will probably also cut down the amount of money saving they do, since most people, when faced with a rise in prices, will prefer to try to keep up their consumption rather than their saving. But though the rise in prices thus reduces the rate of monetary saving, it produces saving of a sort, since it follows, from the fact that consumption is reduced, that resources are set free to be employed in the production of durable goods. Thus we can sharply distinguish the two phases of recovery, before and after full employment. In the first phase, the resources required for the increased production of durable goods are drawn from the pool of unemployment. The increase in the total money income of the community is accompanied by a proportionate increase in the production of goods and services, and there is no sharp rise in prices. After full employment is reached, prices rise, imposing 'forced saving' on the public and thus setting free resources of capital and labour to meet the insatiate

demand for durable goods. It is this distinction between the two phases that is usually meant by the distinction between ' reflation ' and ' inflation.'

These are the consequences of an increase in Investment over Saving. Those of a decline in Saving are, of course, similar. A decline in Saving is the same thing as an increase in expenditure on current goods. So the demand for current goods has increased without there being any decline in the demand for durable goods. Indeed, the greater activity and prosperity of the current goods trades is likely to lead to increased orders being placed for durable goods. Thus the process of recovery is set off and proceeds, as in the previous example, with the significant change in character at the point of ' full employment.'

Possibly the easiest way of visualizing the full effect of Saving and Investment is to return to the picture, mentioned earlier, of the whole economic system as a vast circular flow of money passing from person to person, each person's expenditure being somebody else's income, and every element of income being an element of expenditure for somebody else. Whenever any Saving is done, units of money can be thought of as being taken out of the stream ; whenever any Investment is done, units of money are injected into the stream. Thus, if Saving exceeds Investment, more money is being taken out of the stream than is being put back. The stream is smaller and each person finds at each circuit that the income he receives is smaller than before. So long as Savings continue to exceed Investment, incomes will go on falling and unemployment will go on rising. But if Investment exceeds Saving, the stream of incomes and expenditures will go on rising until there is more money offered for nearly everything than it cost to make.

We have been speaking of Saving and Investment

being unequal to each other. But in one sense they are always equal, for the community's income is necessarily the same as its expenditure; and when the incomes received by the sale of current goods are deducted from one side and the expenditure incurred in buying current goods is deducted from the other, what remains must be equal. But, on the income side, all incomes not earned by making current goods must be earned by making durable goods—*i.e.* they represent the value of Investment. And, on the expenditure side, all expenditure that is not on current goods must be Saving. But this reflection is not as puzzling, or as destructive of the theory, as appears at first sight. What it means is that if the total of the positive savings that the public makes is greater than the volume of Investment, then the difference between the two represents the losses made by the business community, or the 'negative saving' forced upon the community by the fact of depression. And similarly, when the voluntary positive saving that the public performs is less than the volume of Investment, then the unexpected profits of the business community make up the difference. The word 'Saving,' if strictly defined, must include these induced unexpected profits and losses that are forced on the community. If it is so defined, then Saving always equals Investment. But for the purposes of explanation it seems much more convenient to say that 'Saving' means the saving the public would do if its intentions were not upset by business being either better or worse than was expected. The nearest we can come to an exact definition of it is 'the tendency, or propensity, to leave some part of income unconsumed.' And in this sense we can talk of Saving exceeding or falling short of Investment.

Nor merely can we so speak—we must, if we are to explain the phenomenon of the Trade Cycle. For,

although Saving in the wider sense—that is, Saving *plus* profits *minus* losses—is always equal to the value of Investment, the whole economic system is in equilibrium only if Saving, in the sense in which we have been using it—that is, 'voluntary positive saving'—is equal to Investment. If Saving is greater than Investment—the difference being represented by losses—then the level of general demand and the activity of the community at large will be steadily shrinking, and will go on shrinking until people's incomes have been so far reduced that the voluntary saving they do is no larger than the value of the durable goods being produced. And if Saving is less than Investment, then the level of general demand and the activity of the community will steadily grow until *either* people save enough, out of their larger incomes, to match the output of durable goods, *or* rising prices impose an equivalent amount of 'forced saving' on them.

The Trade Cycle can therefore be pictured as an alternating expansion and contraction of the National Income (that is, the aggregate of all the individual incomes of the community). At the top of the boom, something happens to cause Investment to fall below Saving. The discrepancy may be quite small, but it sets in motion a decline in the National Income. Saving is, of course, reduced, but Investment may also have been reduced, since depression makes it a risky and unprofitable business. So Saving and Investment chase each other down a vicious spiral, and the National Income may have been very substantially reduced before they meet in equality. Similarly in the upward process, the change in the National Income necessary to restore balance and reverse the trend may be very many times larger than the original discrepancy which was the start of it all. Thus a small original change results in a large

ultimate change in the National Income. The ratio between them is usually known as the 'multiplier.'

But before we go further to an examination of the way in which Saving and Investment behave in the trade cycle, we must pause, first of all, to note how this more complex theory accords with the Quantity Theory of Money and, secondly, to make a brief reference to some of the fallacious theories of money that have attained widespread recognition.

The Saving-and-Investment theory can explain a number of things about the behaviour of money that the Quantity Theory cannot. For example, it can explain why it is that a shortage of money can always, or nearly always, stop a boom, but a plethora of money cannot start recovery. The business men who initiate Investment do so, in the main, on borrowed money, and they borrow money in the first place from the banks. If the banks are reluctant to grant fresh loans, or if they charge very high rates of interest, that will act as a severe deterrent to new Investment, which will consequently tend to fall behind Saving. But, on the other hand, Investment is undertaken in the expectation of profit, and if there does not seem to be any profitable avenue of Investment, the fact that money can be borrowed easily and cheaply may not induce business men to venture on much new Investment. We come back once again to the metaphor of the governor on a motor—it can stop it accelerating beyond a certain point, but it cannot make the motor go faster when it is running down, or start when it has stopped. The large-scale creation of money at the bottom of a depression will have a beneficial effect only if it stimulates an increase in Investment. And it is fully possible that the creation of money, by frightening people into the belief that the Government is embarking on an unsound policy

of profligacy, may actually have the opposite effect of scaring away what Investment there is.

The Saving-and-Investment theory can also shed a good deal of light on that element which, in any version of the Quantity Theory, remains mysterious—the velocity of circulation. In the last chapter we could get no further than to suggest that the velocity of circulation depends on the proportion of their wealth that people want to keep in the form of money. We could find reasons why, when this proportion starts to rise, it should go on rising, and why, when it starts to fall, it should go on falling. But the Quantity Theory was unable to suggest why these alternative movements should ever start. Now we have a clue to the explanation. For when people save, they are putting more of their wealth into monetary form, and when they engage in Investment, they are moving their wealth out of money into durable goods. Consequently, when Saving exceeds Investment, the community as a whole is increasing the proportion of its wealth that it wishes to keep in the form of money or money-claims. The velocity of circulation accordingly falls. And if more money is created, it may be held as money instead of being spent on Investment. This explains the puzzling phenomenon that when money is created at the bottom of a depression it sometimes has no effect on the volume of spending, so that, in the terminology of the Quantity Theory, V goes down as rapidly as M goes up, leaving MV unchanged. When Investment exceeds Saving, the contrary influences come into play.

This must not be taken as meaning that the Quantity Theory is untrue. Indeed, in its fundamental sense it is perfectly true. The relationship between Savings and Investment governs the short-period fluctuations of employment and of prices. If Savings are in excess of

Investment, then prices will tend to slump below their equilibrium level. If Savings are less than Investment, prices will tend to rise above their equilibrium level. But the equilibrium level itself is at least roughly determined by the quantity of money in existence. The fact that the price of a ton of coal varies round about the figure of £1, and not about 1*s.* or £10, is due to the number of pounds in existence relatively to the quantity of all goods and services to be bought. Prices can go up in a boom without any proportional increase in the supply of money ; but they cannot move to a permanently higher level unless there is a permanently larger supply of money available. The Quantity Theory of Money explains, as it were, the average level of the sea ; the Savings-and-Investment theory explains the violence of the tides.

The theory that has been expounded in this chapter thus goes considerably nearer to the reality of things than the Quantity Theory. It reveals the fundamental tendencies of which the behaviour of money and prices is merely the surface symptom. And it uncovers the significant fact that trouble occurs when money is asked to do the impossible—to store wealth for individuals when the community itself is not storing wealth. This body of thought has formed part of the accepted doctrine of economists only during the past decade or so. But a number of independent thinkers—ranging all the way from out-and-out cranks to reputable heretics—had appreciated the basic fact, that cyclical depressions are *due to a lack of income rather than a lack of money,* for many years during which the orthodox economists were struggling to interpret it in terms of the quantity of money. Not all of those who grasped the central fact, however, were equally successful in carrying their reasoning to a logical conclusion. In particular, two

very widely credited theories appear to embody fallacious reasoning. It will be worth while diverging from our main path at this point to discuss them.

FALLACIES

The first of these fallacious theories is that which can see the effect that Saving has in causing a 'gap' in the circular flow of incomes and expenditures, but fails to appreciate the opposite effect of Investment in closing the 'gap.' These theorists consequently argue that there is a continuous tendency in the monetary system for the expenditure of the community to be less than the cost of producing the goods and services that are available for sale. One form of this theory that was very widely followed in the United States in the years immediately preceding the crisis of 1931 was that advocated by Messrs. Foster and Catchings. The most extreme form of the theory, however, and at the same time the one with the largest following, is that put forward by Major C. H. Douglas and the Social Credit movement. According to Major Douglas, not only is all money that is saved entirely lost to the fund of purchasing power, but also all those items in the cost of production that are not paid directly to consumers (*e.g.* interest paid to a bank, money allocated to depreciation, money paid to other business firms for machinery or supplies or raw material). He apparently[1] holds that the 'gap' in the circular flow of money and expenditures is sometimes as large as 90 per cent.; that is, of all the money paid out by industry, only 10 per cent. ever gets into the hands of consumers and is offered in exchange for industry's

[1] Apparently—because throughout his writings, Major Douglas's economic theories are not only obscurely presented, but overlaid with a vast amount of political, sociological, and even racial nonsense.

products. Any such figure as this is clearly nonsensical; but it is worth while explaining that it does not matter very much who is the first recipient of any money paid out by industry as part of its costs of production. What does matter is whether the money is paid out again by its recipient and eventually reaches the hands of a consumer. Thus a baker's costs of production include the wages he pays to his employees (who are themselves consumers), payments for flour, yeast, electricity, rent, etc., etc., and *if he is to stay in business the amount* of money coming forward to buy his bread must equal all these payments with something left over for his own profit. The flour-milling company which receives the baker's payment for flour has payments to make for corn, electricity, wages, interest, etc., etc. Now, it is essential for the smooth working of the system that the full amount of money paid out by the baker should get into the hands of consumers and be spent by them on bread. The only thing that can stop this happening is if one of the intermediary recipients saves some of the money instead of passing it on; if everybody passes it on, none of it is lost to the circular flow, and if it is not spent on bread it will be spent on something else. When we have allowed for Saving, we have allowed for everything that takes money out of the stream. And if people are Investing as much as they are Saving, then as much is being put back into the stream as is being taken out.

The answer to the 'under-consumptionist' theories is, then, that there is no permanent, inescapable, and continuous cause working to make consumers' incomes insufficient to buy at profitable prices the whole output of industry and agriculture. They may be insufficient at some times and more than sufficient at others, and the explanation lies in the relations between Saving and Investment. The under-consumptionists are sometimes

wrong and sometimes right—but even then their reasoning is faulty.

If you believe that saving causes an unstoppable gap in the monetary system, the obvious remedy is to create enough new money to fill the gap. Some writers would place this extra money in the hands of producers—that is, business firms—as loans. Others, including Major Douglas, would place it in the hands of consumers—that is, the ordinary citizen—as a free gift.[1] But both groups of theorists are agreed that new money must somehow be put into circulation to replace that which is abstracted by saving. Now if this creation of new money has the effect of stimulating Investment, it will do good ; but it seems to be a very roundabout method of achieving what is needed. As experience has shown, the mere offer of money on loan to business men may accomplish nothing. And as for the donation of money to consumers, a large-scale experiment on these lines was tried in the United States in 1936 with the distribution of the so-called 'soldiers' bonus.' The results were much what might have been expected—a temporary spurt in purchases of current goods, but little perceptible influence on the volume of Investment.[2]

The second, somewhat different and much more creditable, line of argument is that presented for so many years with such skill by the late Mr. J. A. Hobson. Mr. Hobson held that the unequal distribution of wealth, by putting so much income into the hands of the rich that they cannot possibly consume it all, produces too

[1] For example, in his evidence to the Macmillan Committee, Major Douglas proposed a plan by which every purchaser of anything was to be given new money (in the shape of bank deposits) to the value of 25 per cent. of everything he purchased.

[2] In view of the widespread interest in Major Douglas's theories, a critical examination of them, which has been published on a previous occasion, is reprinted as an Appendix to this book.

much saving. Mr. Hobson did not, however, mean that Saving exceeds Investment, because the difficulty arises, as he saw it, precisely because this undue amount of Saving *is* Invested. It is Invested, he said, in improved machinery and more efficient means of producing goods, so that the quantity of current goods coming on to the market becomes greater than the poor are able to buy. 'Over-production' and a slump result. According to this theory, if Investment is made large enough to equal Savings, the system is kept in equilibrium *this year*, but only at the cost of producing such a flood of goods a year or two hence that the markets are swamped. Mr. Hobson's point was not that Savings tend to exceed Investment, but that both Savings and Investment are too large, and that the trade cycle and the prevalence of unemployment are both due to the maldistribution of incomes between rich and poor.

Clearly, the distribution of incomes has some effect on the volume of Savings and therefore on the relations between Savings and Investment. If there is great inequality of incomes and many rich men, there will undoubtedly be more saving done than if all incomes are equal. One man with an income of £10,000 a year will probably do more saving than ten men with incomes of £1,000 a year each. If there is a great volume of Saving, it may be difficult to find enough profitable schemes of Investment to absorb the full amount.[1] Thus, indirectly, the inequality of incomes may lead to an excess of Saving over Investment and a deflationary state. But this was not Mr. Hobson's theory. He held that even if the excessive Savings of the rich are Invested —indeed, *because* they are Invested—there will be a slump. We must inquire whether this is true—bearing

[1] More strictly, it may be difficult to find enough projects of Investment that will return what is currently accepted as a reasonable rate of interest.

in mind that if it is true, it shatters the central doctrine of this chapter, which is that the essential condition of equilibrium has been achieved when Saving and Investment are equal.

There are several reasons for believing that Mr. Hobson's diagnosis is wrong. To begin with, slumps do not arrive in the way they would if he were right. In that case, the prelude to a slump would be a growing glut of manufactured goods which, owing to the failure of demand to increase, would force prices down. But it is not so. Usually, in the period just before the initial crisis of a slump, there is a general shortage of manufactured goods, and at the crisis, it is not the supply that increases but demand that suddenly falls away. This sequence of events might possibly be explained away (though it would be curious if events presented themselves under a guise precisely opposite to their real character). But it is more difficult, under Mr. Hobson's thesis, to explain the fact that in the last quarter-century, while the savings of the rich have undoubtedly declined very heavily, the problem of unemployment has got worse, not better. Moreover, if slumps are due to an excessive volume of Saving and Investment, which in turn is due to the maldistribution of wealth, how are we to account for the fact that the years when the Saving and Investment of the rich are at their lowest are slump years, and the years when they are at their highest are boom years?

The truth seems to be that Mr. Hobson has mistaken the consequences of the investment of savings. It is perfectly true that occasionally Investors greatly overestimate the future demand for their products and their Investments consequently result in failure. But if this were the usual result, the majority of money Invested in mechanical improvements would be lost. Actually,

as we know, the great majority of Investments yield a satisfactory rate of return, which they could not do i there were an insufficient demand for the products they help to produce. Moreover, it is not usually the case that the application of additional capital to a mechanica process results automatically in a great increase in production. What it does far more often is to make goods more cheaply. It is the lower price, attracting a greater demand, that leads to a higher production.

None of these, however, seems to be the determining objection to the 'over-production' theory. Let us assume that the effect of Investment is, as the theory says it is, to produce a great increase in the production of goods. Somebody has been paid for making those goods. Every penny of their price represents a paymen that has been made to somebody—either worker, raw material supplier, or creditor. Enough incomes have been created in the process of production to buy the goods. The incomes may not be spent on these particula goods, but if not, they are available for other good and there is no *general* failure of demand. The only thing that can lead to a *general* deficiency of demand fo goods that have been produced (and have created incomes in the process of production) is if more i subtracted from the total of incomes by Saving than i added to them by Investment.

The 'over-production' theory, then, like the 'under consumption' theory, is, in a sense, sometimes right, bu for the wrong reasons. The maldistribution of income may make it difficult to equate Savings and Investment— but if they are nevertheless equated, the community can move towards full employment in spite of the inequalit of incomes. Indeed, in a new country, where there ar large opportunities for profitable Investment, a greate

equality of incomes might lead to an inadequate supply of Savings and a constant danger of inflation.

SAVING, INVESTMENT, AND THE TRADE CYCLE

The theory that has been developed in this chapter has already withstood one or two tests of its consistency and credibility. It remains, however, to be seen whether it can be fitted, without strain, into the familiar sequence of events of the Trade Cycle. Can it explain why the volume of general demand, the activity of trade, and the level of prices all move upwards together for a few years and then move downwards together in unison? Can it explain why, and how, inflation seems to breed deflation, and deflation breeds inflation?

The first step in this demonstration must be to inquire what influences produce changes from time to time in the volume of Savings and Investment, the two essential elements of the theory.

The volume of Saving depends, ultimately and in the long run, on the thriftiness of the population. How much will be saved out of a communal income of £1,000 millions depends on a variety of factors. It depends, for example, on how many individuals share in the total. If the £1,000 millions had to suffice, at to-day's prices, for the whole population of Great Britain we should all be so close to starvation that very little Saving would, or could, be done. Or again, the amount of Saving will be affected by considerations such as the number of children in the family or the comparative equality or inequality of the distribution of incomes. The availability of expensive means of consumption may also have an influence; thus there would probably be more saving to-day if the motor car had never been

invented. On the other hand, the existence of convenient means of saving, such as life insurance and contributory pension plans, possibly increases the total of saving.[1] The rate of interest that can be obtained on savings also has some influence—though it is almost certainly smaller than has often been maintained. Indeed, there are some ways in which a higher rate of interest may lead to smaller, not larger, savings. For example, a permanent rise in the rate of interest would lead to a reduction in the rates of premium on life insurance ; they would also make it possible for retired persons to live on a smaller accumulated capital ; and on both counts less saving would be done by those whose only saving is to provide for their old age by means of life insurance policies. In general, however, a comparatively high rate of interest on savings can be expected to evoke a larger volume of Saving than would be evoked by a lower rate of interest if every other circumstance remained the same.

None of these factors, however, is the dominating influence on the changes that occur in the volume of saving from year to year. Neither general thriftiness, nor the size of the population or of the average family, nor the desirability of motor cars changes from year to year. The dominant factor that determines, in any year, how much out of its income the public will save is, quite simply, how large its income is. The larger the income the more will be saved ; when total income falls, savings also fall. But changes in the size of the community's income, as has been demonstrated in the earlier sections of this chapter, are the result of the relationship between Saving and Investment—that is to say, the volume of Saving is the *consequence* of the Trade Cycle and cannot be its cause.

[1] So long as more is being put into such funds than is being taken out.

We must not, however, entirely dismiss Saving from consideration as a causal factor. The actual volume of Saving that is done at any time is the result of two factors—what we may call the public's propensity to save and the size of its income. It is the propensity to save that determines that, say, £100 millions will be saved out of an income of £1,000 millions, £220 millions out of £2,000 millions, £500 millions out of £4,000 millions, and so forth, and these results depend upon the aggregate of a vast number of individual decisions. The size of the public's income is, however, the result of the state of trade—and to that extent the volume of Saving is also a resultant and not an originating factor.

Let us now turn to Investment and inquire what determines its magnitude. What decides a business man when he is wondering whether to undertake a piece of Investment? The crucial question in his mind is whether it will be profitable—whether he will make money or lose money by it. Profitability is the relation between what the Investment will bring in and what it will cost. Now one of the most important characteristics of Investment is that the money it will bring in lies in the future—that follows from the fact that Investment is, by definition, the creation of durable goods. When a man is building a house he is estimating the money it will bring in over a long range of years in the future—and, of course, the longer the range the more likely is the guess to prove wrong. Moreover, even though the profits to be earned by Investment over, say, the next twenty years may in fact be a factor which, if only we knew what it was, was quite fixed and definite, nevertheless business men's estimates of it may vary very considerably from time to time. Thus, if there is a depression now, in 1940, there will be little demand for houses now and the builder cannot help being

influenced by that, even though it has little or no bearing on what the demand for houses is going to be on the average of the years 1940 to 1960, or over an even longer period. Thus, though Investment necessarily relates to the future, it is always being influenced by the conditions of the present. Moreover, there are all sorts of outside influences intervening to exercise a real or fancied influence over the volume of Investment. A new invention—railways are the outstanding example—may quite suddenly open a whole new and previously unsuspected field for profitable Investment. In general, however, we can say that the chief influence, not on the *actual* profitability of Investment but on business men's *estimate* of its profitability, is the state of general demand *at present*. This is why, when a slump comes, whatever may have caused it, it tends to be accompanied by a reduction in the volume of Investment.

So much for the return on Investment. The other element that combines with the prospective return to determine the profitability of Investment is its cost. Cost may mean the cost of the labour and materials required to make a durable object. For example, if building wages have been pushed up very high, and if bricks, timber, glass, etc., are all very expensive, the possibility of making a profit in the future out of houses built now may be considerably diminished. But the most important element in the cost of any enterprise that depends on putting capital down now in return for rewards in the future is the rate of interest that has to be paid on the capital that is borrowed for the purpose.[1] When a business man is seeking to determine

[1] Most Investment is done on borrowed money. Even when it is done out of the accumulated funds or the current savings of the persons who undertake it, its probable return has to be weighed against the rate of interest that could be earned by lending the money instead of using it

whether a given piece of Investment will be profitable he is asking himself whether the income it can be expected to bring in in future years will be more than the interest he will have to pay on the capital he borrowed to create it. And clearly, if the rate of interest is lowered, the apparent profitability of Investment will be increased. This is a most important—indeed, a vitally important—fact. The rate of interest at which money can be borrowed for considerable periods for purposes of commercial Investment is, in this country, rarely as low as 4 per cent. and rarely higher than 7 per cent. Now there is a very big difference between 4 per cent. and 7 per cent. For example, if a house costs £1,000 to build, its weekly rent must be at least 27s. if the builder borrowed at 7 per cent.,[1] while it could be as low as 15s. 6d. a week if the capital had been borrowed at 4 per cent. And if it were possible to borrow money for house-building at 2 per cent. the weekly rental of a £1,000 house could be something in the neighbourhood of 7s. 9d. a week. Clearly, the demand for houses is enormously influenced by the rate of interest that is charged for borrowed money. The same is true of other forms of Investment. The desirability of electrifying all the railways of the country, for example, turns very largely on the rate of interest at which the capital expenditure involved could be raised. The desirability of building a new factory depends on an estimate whether the profits that it will be possible to make on the articles to be produced in the factory will be more or less than the interest that will have to be paid on the capital sunk in it.

for direct Investment. Thus the two cases are very similar. In the case of borrowing, interest has to be paid ; in the case of the use of accumulated funds, the interest they were earning, or could earn, has to be forgone. In either case, the rate of interest is a decisive factor in the calculation.

[1] Even without any provision for builder's profit or even for owner's repairs.

The rate of interest is thus a vital factor in determining the volume of Investment. In any set of circumstances, a reduction in the rate of interest will tend to lead to an increase in the volume of Investment and vice versa. Unfortunately, we cannot go on to say that the volume of Investment can at any time be definitely fixed by manipulating the rate of interest. There are other factors that bear upon the problem. For example, what the business man compares with the rate of interest is not the actual return that will in fact be brought in by his contemplated project of Investment but his estimate of the return. There are times when the community is suffering from so severe a slump and losses are so much more common than profits that business men come to be persuaded that no form of Investment will yield any return. In those circumstances, so far from paying for the use of borrowed money, they would have to be paid to use it. Or again, the return on Investment may seem to be not small so much as uncertain. Thus, a given Investment may be estimated to yield 8 per cent. in peace and nothing in war. If there seems to be an even chance of war breaking out, the business man would have to be able to borrow money at less than 4 per cent. to cover himself. At other times, precisely the opposite is true; the community is so prosperous, such large profits are being made from projects of Investment, and the future seems so secure that the business man will promise to pay almost any rate of interest to get his hands on capital. Thus it may be theoretically true to say that, if it were possible to manipulate the rate of interest charged on borrowed money, it would be possible to make the volume of Investment whatever we wanted it to be. But, in practice, that would involve not merely perfect ability to manipulate the rate of interest (a matter into

which we shall inquire in the next chapter) but the ability to manipulate it between, say, *plus* 20 per cent. and *minus* 20 per cent.

We have, then, arrived at this point : the volume of Saving depends partly upon the propensity to save and partly upon the size of the National Income—that is, on the state of trade ; the volume of Investment depends partly upon the state of trade and partly upon other factors, of which the rate of interest charged upon borrowed money is the most important ; and the state of trade depends upon the relationship between Saving and Investment. At first sight we may seem to have got into an impasse, for the state of trade appears both as cause and as effect. In point of fact, however, it is precisely this complex relationship that enables us, with the instrument of this theory, to give a complete explanation of the Trade Cycle. Any explanation of the Trade Cycle must take account of three facts. First, it must be able to explain the fact that while both inflation and deflation are, to begin with, cumulative, they nevertheless alternate—that is to say, each first feeds on itself but later gives birth to the other. Secondly, it must explain the fact that the alternation occurs at fairly regular intervals. And thirdly, it must explain the fact that the transformation from boom to slump is violent and sudden while the contrary change at the bottom of the slump, from which recovery emerges, is very slow and gradual.

Let us begin with the position just after recovery has given way to decline. We will investigate shortly why this transformation happens ; for the present we start from the assumption that it has happened and that Saving has come to exceed Investment. As a result, there is a 'gap' in the circular flow of money ; demand is below what would be necessary to buy the goods and

services produced ; and the level of activity is consequently tending to fall. We have to explain why this process goes on cumulatively for a time and then reverses itself. It is easy to see how depression feeds on itself. The fall in the communal income will reduce the volume of Saving. But it will also tend to reduce the volume of Investment, for the fall in activity will make Investment look much less attractive. Thus, for a time Savings and Investment will fall together and there will be little or no tendency for the disequilibrium between them to disappear. The level of activity will decline without any apparent limit. But the further the decline in income goes, the more rapid will be the decline in Saving. This follows from the fact that when a man or a community is rich it saves not only a larger amount but a larger proportion of its income. If savings are £500 millions when income is £5,000 millions, they will be less than £400 millions when income is £4,000 millions. The bigger the fall in income, the faster is the reduction in savings. There is a certain level of 'necessary' savings that people will make very heavy sacrifices to perform, but this may be outweighed, as the depression deepens, by the 'unsaving' of people who are drawing on their accumulations of the past. The fall in Investment, on the other hand, tends to get slower and slower as the depression proceeds, unless there is some quite exceptional happening, such as a bank panic or a currency crisis, to increase the fears of business men. In prosperous periods, business men pile up heavy stocks of raw materials, and in the early part of a depression the gradual liquidation of these stocks is an important cause of 'dis-Investment.' When it has been finished, because stocks have been reduced to the minimum necessary for carrying on business, one reason for the decline in Investment is removed. More-

over, there are at any time certain projects of Investment —especially the renewal of plant—for which funds have been accumulated and which will be undertaken in any case. Or again, the depression may lead the state to undertake a programme of public works. Thus, if the communal income goes on falling, a point must come at which Saving, in its fall, overtakes Investment; for while the production of durable goods can hardly ever cease completely, the net Saving of the community might conceivably vanish altogether. Thus the extent to which the community's income has to fall (*i.e.* the extent to which unemployment has to rise) to restore the balance depends (if there is no change in the public's propensity to save) on the extent to which Investment can be stimulated either by reductions in the rate of interest or by the avoidance of action likely to stampede business men, or by other means.

The trend once having been reversed, Saving and Investment will tend to chase each other upwards. Each increase in Investment will increase the national income, and diminish unemployment. Part of the increased incomes thus created will be saved; but part will be spent, and this additional consumption will make new Investment seem even more profitable. The community is in the happy position of being able both to spend more and to save more. The increasing volume of Investment requires an increasing volume of money creation by the banks, and if there is some rigid quantitative limitation on the creation of money the whole process may be brought to an end when the banks run up against that limit. New advances will be refused, the rate of interest will go up, and the volume of Investment will be choked off.

But an inelastic supply of money is not the only thing that will bring the upward phase of the Trade

Cycle to an end. If it goes on long enough, it is bound to collapse of its own weight. The community can both consume more and spend more only so long as it can draw on unemployed resources of labour and capital, whose re-employment increases the national income both in money and in real terms. But as soon as 'full employment'[1] is reached, this is no longer possible. If Investment is at that point still increasing and still greater than Saving—if, that is, money is still being inserted into the circular flow in larger quantities than it is being taken out—an increasing quantity of money is being offered for a quantity of goods that cannot be further increased. Prices rise, and the further increase of Investment is made possible only by the fact that the public is compelled by the rising prices to restrict its consumption. The effects of this may be, at first, to intensify the boom. For one thing, the public, when forced to retrench by rising prices, may try to restrict its Saving, thus still further enlarging the gap between Saving and Investment. Secondly, rising prices themselves tend to increase the profits of all sorts of traders and still further increase that appearance of prosperity which is the surest stimulus to Investment. And thirdly, although a smaller volume of current goods is being sold, they are being sold at higher prices, and the business of making current goods seems for a time to be as profitable as ever. So, consequently, does the business of making machinery and other durable goods to assist in the manufacture of current goods. But this is a false paradise. Rising prices affect the cost of producing the current goods and the durable goods. It soon becomes apparent that if the volume of sales in the current goods industries is falling, there will be less demand for machinery and other durable goods to assist in their manufacture. The

[1] See page 152.

rising tide of Investment, in fact, by forcing the public to consume less, has cut the ground from under its own feet.

Thus, inflation, like deflation, tends for a time to intensify itself. But there are forces that come into play in the later stages which make a reversal inevitable. Moreover, since the reversal is the result of an organic development and does not merely happen, it naturally follows that it takes approximately the same time to work itself out on different occasions. Thus, two of the characteristics of the Trade Cycle are satisfactorily explained. The third—the tendency for there to be a sharp reversal at the top and a very gradual one at the bottom—can also be understood when it is borne in mind that the dominating part in the movements of the Trade Cycle is played by the volume of Investment, which in turn depends upon the psychology of business men. People can be scared in the mass, and quickly; the restoration of confidence is a much slower and more painful process. Moreover, a significant part is played by the volume of stocks. At the height of a boom, traders have large stocks which they have bought at high prices. If for any reason they get scared, they will act quickly and drastically, since the alternative is to suffer heavy losses. But in the reverse case, at the bottom of the slump, when the opinion begins to gain ground that it would be wise to build up stocks before prices begin to rise, even the most confident trader will hardly move other than cautiously. For this reason the raw material markets may be transformed from 'seller's markets' (*i.e.* where buying is insistent and the seller is in the strategic position) into 'buyer's markets' overnight, while the opposite movement is much slower. But the trend of these markets has a powerful material and psychological effect upon that 'atmosphere' of

confidence or gloom that weighs heavily with business men. Finally, if the upward movement is brought to an end by a shortage of money, this too, as we know from experience, is liable to come to a head suddenly, while at the other end of the cycle, if the quantity of money has any influence at all, it can produce its effect only by being available at low rates of interest for those business men who can overcome their timidity. The act of stopping a horse from drinking is necessarily sharp and sudden ; to bring him to the water and persuade him to drink may be a much slower business.

The theory expounded in this chapter can thus be said to come well out of the test of applying it to the observed behaviour of the Trade Cycle. The practical conclusion it suggests is that the puzzling fluctuations of the volume of general demand, with their consequence of unemployment, are due to the interactions of two ultimate factors, the public's propensity to save and the volume of Investment. The propensity to save[1] does change from generation to generation and it is susceptible to alteration by public policy (*e.g.* by changing the distribution of incomes). But so far as any one Trade Cycle is concerned, it must be taken as fixed. It follows, therefore, that the governing factor in any particular Trade Cycle, and the one that must be brought under control if the Trade Cycle itself is to be controlled, is the volume of Investment. Of all the influences that bear upon the volume of Investment other than the state of trade itself, three can be selected as of paramount importance—the supply of scientific inventions (which largely determines the actual return that can be secured on Investment), the state of business confidence (which determines whether the actual prospects are over-

[1] The propensity to save is not, of course, the same thing as the actual volume of Saving. See page 168.

estimated or under-estimated), and the rate of interest (which determines what rate of prospective return is sufficient for action to be taken). Of these three, only the last is a monetary phenomenon, which can be influenced by monetary means.

One more word should be said about the nature of the object for which control should be exerted. Much has been said in this chapter about the necessity for producing an equilibrium between Savings and Investment. A position of equilibrium is the only stable position possible, since only then is the National Income under no compulsion either to increase or to diminish. But it does not follow that there is only one equilibrium position possible, or that any equilibrium is satisfactory. It would be perfectly possible to have Savings and Investment in perfect equilibrium, but with a gigantic mass of unemployment—stability in depression, in fact. Several countries have found great difficulty in the last two decades in reducing unemployment beyond a certain point—as if there were some fixed level above which Investment could not rise. The only equilibrium that is fully satisfactory is equilibrium at full employment. That should be the object of monetary policy.

THE ECONOMICS OF WAR

This chapter cannot properly be concluded without a brief note on the monetary phenomena associated with war. Wars have nearly always been accompanied by very severe inflation. In the war of 1914–18, for example, the value of money in Great Britain at the end of the war—or soon after—was only about one-third of the pre-war level, and this was the smallest fall that occurred in any European belligerent. How is this inflation produced?

There is, in wartime, of course, a vast production of munitions and other war material. How should these goods be regarded? They have a short life and might therefore be properly classified as current goods. But they contribute nothing to current consumption—indeed, consumption has to be severely limited to make their production possible. Moreover, the economic significance of the distinction between current and durable goods lies not in the time factor itself but in one of its implications. Durable goods are those which are not produced in proportion to the money available out of present incomes to pay for them. They can be produced either in larger or in smaller quantities than the corresponding Saving—that is, they either increase the circular flow of money or else create a 'gap' in it.[1] From this point of view, munitions have a much greater affinity with durable than with current goods. Durable goods are produced with an eye to future income, the production of munitions is not undertaken with reference to any income. But the significance of both is that their production bears no particular proportion to present income, and it is from this fact that monetary disturbances arise. Munitions are therefore best regarded as a special form of Investment. Their economic effect at the time of their production is the same as that of the production of normal durable goods, but they bring the community, of course, no future enrichment, and any debt incurred in the process of producing them remains as a dead-weight; it is debt, not capital.

War, then, brings an enormous increase in Investment, making it very greatly exceed the volume of Saving. Various expedients are tried in wartime to

[1] Current goods can also be over-produced or under-produced. But production and consumption are so close together that any error is very quickly corrected.

increase Saving. *First, taxation is increased*, and though taxation is not normally to be regarded as Saving, since it is almost entirely spent on current expenses, it is clearly Saving when it is spent on something that we have classified as Investment. Secondly, the public is exhorted by all the arts of propaganda to increase its Saving. Thirdly, the rationing of consumption goods, if it is carried far enough, may also have the effect of increasing Saving. But even with the help of these expedients, Saving, in a major war, remains far below Investment. If full employment has not been reached when the war breaks out it will quickly be attained under the pressure of an insatiable demand. Thereafter, the continued excess of Investment over Saving leads direct to inflation and rising prices. The excess—which shows itself, of course, as an excess of Government expenditure over receipts from taxes and savings—is financed by the creation of money,[1] and this additional supply of money competes with the existing supply to force up prices and restrict consumption. The rise of prices is the only remaining way in which the Government can get the resources of labour and capital it requires for its war programme. Since this particular variety of Investment is large, continuous (while the war lasts), and subject to increase rather than decline, the resulting inflation is of grandiose dimensions. But in economic analysis the position is exactly the same as that which results if an upward swing in the Trade Cycle is continued after the point of full employment is reached.

[1] The fact that money is being created for the sole purpose of financing the Government may be concealed. Thus in 1914–18 the British public were encouraged to borrow from the banks in order to invest in War Loan, depositing the Loan as security for the advances. The Government thus avoided borrowing directly from the banks (which everybody would have recognized as inflation). But the money it borrowed was nevertheless newly created for the purpose.

Chapter VI

MONETARY POLICY

THE OBJECTS OF MONETARY POLICY

THE last three chapters have been devoted to a brief analysis of the way in which money works in a modern community and the way in which it affects the fluctuations of trade and the process of production. The second part of this book will be concerned with money in its international aspects ; but before we take up this second half of the broad subject of money, the present chapter must be inserted. It deals with a matter which, to speak strictly, is outside the province of this book, whose primary concern is more with description and analysis than with attempting to make positive suggestions for policy. But it would be foolish to leave the argument suspended at the point at which it has now arrived without some attempt to draw the conclusions for policy and action that logically follow from the analysis. No attempt will, however, be made in what follows to give a full account of monetary policy—a subject which could well fill another book of this size.

The economic advantages of having a monetary system are so great that no modern community could exist without one. But the preceding chapters have shown that, together with its great advantages, money also has some disadvantages. The fluctuations of prices and the ebb-and-flow of the Trade Cycle, both of which are at least partly due to the existence of money, are the

chief of these disadvantages. The object of monetary policy should obviously be to reduce these disadvantages to a minimum.

As on many previous occasions, we must immediately draw a distinction between the long-term and the short-term behaviour of money. In the long-term—meaning by that a period of a generation or more—the outstanding monetary phenomenon is the prevailing tendency of prices to rise in one period and to fall in another. This tendency asserts itself on the average of years of good and bad trade, and it would be difficult to say that the rate of human material progress was faster in the one period than in the other. There is some evidence to show that, in long periods of falling prices, real wages increase more rapidly than in periods of rising prices, but that there is more unemployment. To express a judgment on which of the two was preferable would imply a choice between higher real wages or more constant employment. In the short period, the case is more clear-cut. The alternation between boom and slump—which occurs whether the long-term trend of prices is upwards or downwards—is almost wholly bad in its effects.

It would be tempting to follow a tidy pattern of ideas and set out long-term and short-term objects of monetary policy. In fact, however, both the objects of a long-term policy and the means of attaining it become increasingly shadowy as they are closely studied. What, for example, would be the ideal long-term tendency of the price-level—upwards, downwards, or stable? Arguments can be made for each. Thus it is frequently argued that since the productivity of the whole economic system is increasing at an average rate of about 1 per cent. per annum, the price-level should fall by about the same proportion. By that means wage-earners

would automatically receive their share of the benefits of the increasing capacity to produce, without having to make periodic claims for increased wages. Moreover, falling prices are the only means by which those people whose incomes are entirely fixed in terms of money can enjoy any share at all in the community's growing prosperity. If, with increasing productivity, prices do not fall, there will be a tendency for the volume of profits to rise (since wage increases will never quite keep pace); excessive profits breed unhealthy expansion, and there may be something closely akin to inflation, even with stable prices. The chief exhibit in support of this line of argument is the course of events in the United States between 1922 and 1929. Prices were then, on the average, remarkably stable (if the prices of Stock Exchange securities are excluded from the index number); but few people would now question that these same years witnessed in the United States an inflation which is almost without parallel in economic history either for its duration and scope or for the disastrous nature of its consequences.

This is the argument for falling prices. But just as good an argument can be made for very gradually rising prices. Deflation, it would be argued, is a more real danger than inflation; for every year when circumstances conspire to produce an inflation, there are at least three when the atmosphere is in greater or less degree deflationary. In its normal state, the economic system needs the slight tonic effect of slowly rising prices to keep it working—and if rising prices are hard on the owners of fixed incomes, very few individuals live long enough to notice the difference. The falling prices argument can point to the historical example of the United States in the 1920's; but the rising prices argument can point to the whole of monetary history.

The world has found a gently rising price-level necessary to keep the steadily mounting burden of money debt from becoming a burden. Humanity is so constituted that it cannot get on without going into debt to itself—debt is, indeed, the legacy of every depression—and it is far better to solve the resulting social problem by the gradual, partial, and imperceptible default of rising prices than by recurring violent clashes of debtors and creditors. The only century that has been prosperous and solvent without rising prices was the nineteenth, which had the quite exceptional benefits of the Industrial Revolution combined with a very rapid increase in population. More static communities, like our own—the argument would conclude—will throttle themselves with the mortmain of usury unless they have rising prices.

And for those whose minds run to compromise, there is the middle way of stable prices. Possibly, as a purely theoretical objective, this would be the best, for if the value of money never varied perceptibly, money would be as nearly 'neutral' as it could be—and neutrality is the proper attitude for something, like money, that was invented to serve as an instrument or intermediary.

If it is difficult to determine the objectives of long-term monetary policy, it is even more difficult to lay down methods of attaining them. For any long-term movement of prices is made up of the short-term fluctuations. A long-term rising trend emerges when the upward legs of the trade cycle move further than the downward legs, and vice versa. It follows that the long-term trends can only be influenced through the medium of the short-term fluctuations. There is obviously need for the greatest elasticity in dealing with the trade cycle ; at some times the influence of conscious control should be towards higher prices, at others towards lower prices. There are consequently bound to be times when

any long-term policy would be pulling in the opposite direction from short-term policy—with inevitably unfortunate results.

This is the defect that has attended the various conscious and unconscious attempts that have been made to control the long-term trend of prices. Most of these attempts have been devices to control the quantity of currency in existence. Logically, this method is not unsound ; we concluded in the last chapter that the Quantity Theory is broadly sufficient to explain the long-term movements of prices, and though the quantity of currency is not the same thing as the quantity of money, the links between the two are comparatively close and rigid. Throughout most of monetary history, the quantity of money was automatically limited by the existing quantity of the money-metal, and when paper money became the dominant part of the total circulation, its quantity was likewise related to the volume of the gold reserves of the Central Bank. In England, notes issued above a certain 'fiduciary' amount had to be backed pound for pound with gold in the Bank of England. The American system is that gold must be held to the value of 40 per cent. of the value of the notes issued. In France, before 1914, the circulation was simply limited to a certain stated maximum. But fixed maxima which are appropriate to one period are inappropriate to another, and a rigid connection with gold merely puts the quantity of money at the mercy of mining science, exploration, and geology. None of these are scientific devices for determining the long-range tendency of prices. They are merely crude expedients for ensuring that, whatever else may happen, there can never be a rapid and long-continued inflation. But the difficulty about any such limits on the expansion of the volume of money is that they may come into play at

precisely the wrong moment. The upward phase of the trade cycle always requires an increasing volume of currency, and though it may be sound policy to check it at some point, it will be the purest accident if the right point happens to be precisely that dictated by a rigid limit fixed years earlier or by the accidental quantity of a yellow metal in existence. Sometimes the quantity of currency (though not of money) increases in a depression—for example, if the banking system is not trusted and the public withdraws its deposits in cash—and it would be both senseless and disastrous to refuse an increase at such a time.

Various suggestions have been made in recent years for more subtle methods of controlling the volume of money, with control of the long-term trend of prices in view. For example, it has been suggested that the maximum permitted volume of currency should vary with the population, or with the volume of production. But all these proposals are open to the objection that if they are not to obstruct short-term policy (which is *more important than long-term policy) they can only* be made to apply on the average of years, not to any one particular time—and any such modification would make them practically impossible to apply.

We are, consequently, forced to the conclusion that long-term policy must be left to emerge from short-term policy ; after all, anything that produces stability in the short period can hardly be objectionable in the longer period. To this we may safely add the rider that, since the Quantity Theory has been found to be valid in the longer periods, any short-term policy that involves the large-scale creation or destruction of money is to be avoided. But even this statement must be modified to mean ' the large-scale creation or destruction of money *on balance.*' It may be necessary at times to

create money. To the ordinary man, money is merely the most liquid form of property. He may wish at times—for example, in a deep depression—to hold a greater proportion of his wealth in liquid form; the factor to which, in Chapter IV., we gave the symbol k may rapidly increase. Now if at such a time the quantity of money is not increased, the enhanced desire to hold money will result in a competitive bidding for it. The value of money will rise in relation to other things, or (to say the same thing in another way) everything will be offered for sale in exchange for money. In short, there will be a fall in prices and an intensification of the slump. If the public's increased preference for liquidity could be satisfied by increased supplies of money—if the supply of money increased *pari passu* with the demand for it—this violent change in the value of money could be avoided. It may, therefore, be desirable to create additional supplies of money in such circumstances, and their creation will not raise the level of prices but merely save it from falling. Later on, however, when the public's k returns to normal, it may be necessary to mop up the extra supplies of money created in the depression. But so far as the relation between the long-term and short-term behaviour of money is concerned, it is enough to say that any large-scale creation or destruction of money, *on balance*, is to be avoided. Having said that, we can concentrate on short-term policy and not quibble about whether a 1 per cent. per annum rise or fall in prices is to be preferred.

This puts the whole responsibility on short-period policy. What should its objective be? It would be logical to conclude from the analysis of the preceding chapter that the obvious objective should be to attain an equilibrium between Saving and Investment at the point of full employment. We may, indeed, accept this

as a definition ; but it needs some interpretation. One of the results of the chronic alternation of boom and slump is that the bulk of the community's Investment is crowded into two or three years out of every eight. As a result, the construction industries have to have enough labour and capital attached to them to accommodate the peak pressure on them. If ' full employment ' were so defined that it was not reached until the whole of this labour and capital were busy, and the attempt were made to stabilize such a position, the result would be that the community would be accomplishing peak Investment all round the trade cycle—which is almost certainly more than it wants to do, year in, year out. In short, the attempt to achieve this sort of ' full employment ' would involve extracting forced savings from the public, and such a position, as has been explained on page 175, is necessarily unstable and the prelude to deflation. In any community where the citizens have a fairly free choice as to what they shall do with their incomes, the normal ' shape ' of the national economy—that is, the distribution of resources between industries making capital goods, those making consumers' goods, and those intermediate between them—is determined by the public's distribution of its income or, more strictly, by what that distribution would be if everybody were employed. The number of people attached to the construction industries is almost certainly more than it would be if this normal ' shape ' actually prevailed. To try to put them all to work would, therefore, be to try to perpetuate a distortion—and it could be perpetuated only if there is some means of making people save more than they want to. In other words, the complete employment of the construction trades is not compatible, in a relatively free economy, with equilibrium. If we take as our primary objective

the avoidance of the disastrous alternation of boom and slump, we must therefore define 'full employment' as *something short of the complete employment of all the* personnel in the construction trades. This makes it possible to reinstate 'equilibrium of Saving and Investment at full employment' as the objective of policy, but it makes it more difficult to say just what 'full employment' is. Perhaps the nearest brief approach to a definition is to say that 'full employment' is reached when all the resources of labour and capital are at work except that part of the construction trades that is surplus to average requirements. If 'full employment' in this sense were ever reached and maintained for a number of years, then the surplus labour and capital in the construction trades would gradually drift out and find other employment. *When that had happened, we could* allow 'full employment' to mean what it appears to mean, and say that 'equilibrium of Saving and Investment at the point of full employment' was the object of monetary policy.

The object of policy having been defined, how shall we reach it? The two basic factors in the situation, as we discovered in the last chapter, are the thriftiness, or 'propensity to save,' of the public and the volume of Investment. Thriftiness can be altered by public policy —for example, by a redistribution of incomes; if the rich were taxed heavily and the proceeds handed over to the poor, the result would undoubtedly be a decline in thriftiness. Or if the poor were taxed heavily and the State itself used the proceeds for Investment (this is what happens in Germany and Russia, and in any country in wartime), the result would be an increase in thriftiness. But, except in the overwhelming emergency of war, when people will consent to things they would otherwise resist, these are not things that can be done quickly. Still less

are they things that can easily be reversed when changing circumstances call for the opposite policy. So far as any one trade cycle is concerned, thriftiness must be taken as given, and hardly subject to manipulation by public policy.

This means that the chief channel through which monetary policy can work is the volume of Investment. It is fully possible, of course, for the state to regulate the volume of Investment directly, by itself intervening and initiating Investment when the public demand for durable goods slacks off. To discuss this possibility in full would take us far beyond the sphere of this book, since this sort of policy can hardly be called monetary. In general, however, it may be said that the objections to a 'public works' policy are more practical than theoretical. In theory, it is perfectly possible to envisage the State increasing or diminishing its own capital expenditures in such a way as to keep the total of all Investment stable. In practice, however, there are serious difficulties. In the first place, the choice of projects open to the State is very limited; it can hardly build factories or replace machinery unless it is going into business as a manufacturer, or accumulate stocks of goods unless it is going to set up as a merchant. Secondly, there are the grave difficulties of getting the machinery of the State moving in time—public works programmes, as a result, have a habit of maturing when they are least needed. And thirdly, if the State is really going to make an impression on the trade cycle by financing its own Investment, it will have to borrow very large sums of money; and the sight of the National Debt increasing so rapidly may frighten the business community so much that private Investment falls off as rapidly as public Investment rises. This—to repeat—is in no sense a full and final discussion of a large and

intricate subject. It is possible that experience will perfect ways of directly controlling the volume of Investment. But even so, they will need to be reinforced by the more properly monetary methods of influencing Investment, to which we now turn.

THE WEAPONS OF THE CENTRAL BANK

The task of conducting monetary policy naturally falls to the Central Bank, which occupies the strategical position in the whole structure. The Central Bank can work upon the volume of Investment in two ways which, though closely related and interlocking, are formally separate : it can vary the volume of money and it can alter the rate of interest at which money is lent and borrowed. These two powers are exercised in Great Britain by the Bank of England. By increasing or diminishing its own assets the Bank of England can, in the way described in Chapter II., influence the size of the reserves of the Member Banks, and hence of the amount of credit they are prepared to extend. By altering the Bank Rate the Bank of England can influence the rate of interest paid to depositors and charged to borrowers. These are the two great weapons of the Central Bank for combating the Trade Cycle.

The origins of the Trade Cycle are not purely monetary. For example, if political interference with the freedom of trade is reducing the profitability of business it would be idle to expect the Central Bank, by monetary manipulation, to maintain a position of equilibrium. Some writers have argued that even though the origins of the Trade Cycle may be non-monetary, the corrective power of monetary action is so strong that the Central Bank should be able to prevent the non-monetary disturbances from producing their effect. It is true

that if banking policy is to succeed in establishing a stable price-level it must find means of counteracting non-monetary disturbances, as well as of preventing all purely monetary disturbances ; but the desirability of this power does not prove its existence. It would be a pity to proclaim the task hopeless before it has been really begun ; but it must be realized that it is at least highly doubtful whether monetary and banking policy alone will ever be able to cure the Trade Cycle. If the Trade Cycle affected all branches of economic activity equally and at once, monetary policy would be extremely powerful. But in fact the Trade Cycle is not so much a dislocation of the economic system as a whole, as a lack of balance between its component parts. Banking policy can (subject to the qualifications examined below) stimulate an increase of Investment ; but it can hardly dictate what form that Investment is to take. Falling prices often emerge from a position of disequilibrium between some industries which are expanding too rapidly and some industries which are expanding too slowly. If the Central Bank brought about an increase of Investment in such a case, it might serve only to increase the rate of expansion of those industries which were already growing too fast. We must therefore beware of assuming too readily that monetary action can cure non-monetary troubles. This whole question was authoritatively summed up by the Macmillan Committee in 1931. 'It seems to us clear' they wrote, 'that the economic difficulties of the post-war decade are primarily due, not to any wanton misbehaviour on the part of the monetary factors themselves, but to unusually large and rapid changes on the part of what are rightly described as non-monetary phenomena, these non-monetary factors again themselves producing monetary changes. . . . Our view is, therefore, that the price level is the outcome of

interaction between monetary and non-monetary factors, and that the recent world-wide fall of prices is best described as a monetary phenomenon which has occurred as the result of the monetary system failing to solve successfully a problem of unprecedented difficulty and complexity set it by a conjunction of highly intractable non-monetary phenomena. Whether the international monetary system could have solved its problem is a matter on which we should hesitate to express a dogmatic opinion.'[1]

It is not necessary, however, to assume the possibility of complete success in subduing the Trade Cycle ; it is a matter of general agreement that the banking system, under the leadership of the Central Bank, could at least do a great deal to moderate the swings of prosperity and adversity and to see that they are not unnecessarily complicated by additional monetary instabilities. We may therefore return to the two instruments by which it can exercise its control—the regulation of the volume of credit and of the rate of interest—and examine the possibilities and limitations of each in turn.

Before it can apply either method of control the Central Bank must first be sure that its intervention is necessary : diagnosis must precede treatment or cure. This is not merely a point of logic ; economic diagnosis is often immensely difficult. How is the Central Bank to know when inflation or deflation is impending and needs correction ? A rise in prices is good presumptive evidence of inflation. But falling prices may be merely the reflection of increasing efficiency. The Central Bank will also have to take care to distinguish the effects of monetary disequilibrium from the effects of other disturbances. The existence of excessive unemployment is

[1] Report of the Committee on Finance and Industry, Cmd. 3897 (1931), page 92.

a case in point. Unemployment *may* be due to an excess of Saving over Investment, in which case corrective action by the Central Bank is desirable. But it may equally well be due to the fact that the level of wage-rates is being maintained too high (too high, that is, relatively to all other prices); for wages are the price of labour, and if the price is too high the supply will exceed the demand, just as in the case of every other commodity. If this is so, the Central Bank can do little, for high wages and high unemployment are quite consistent with a position of perfect equilibrium so far as purely monetary factors are concerned. It is, of course, arguable that the Central Bank should deliberately disturb the prevailing equilibrium in order to raise all prices other than that of labour, and re-establish a new equilibrium at a higher level. But the re-establishment of equilibrium, once it is disturbed, is not the easiest matter, and since higher prices all round would mean a reduction of *real* wage-rates, it is much simpler (from the economist's point of view, if not from the politician's) to lower the rates of wages. It is only fair to state that too *low* a level of wage-rates can equally be the cause of disequilibrium. The point is that it is not the Central Bank's business to alter wage-rates, either upwards or downwards, and if wage-rates are out of adjustment with all other prices, it would seem more sensible to adjust the wage-rates to the rest of the price-structure rather than the rest of the price-structure to wage-rates. In other words, in the conditions mentioned, unemployment is not a monetary problem at all. At other times, of course, it most decidedly *is* a monetary problem. Although the *existence* of unemployment is not a convincing symptom of monetary disease, however, any *increase* of unemployment is a fairly reliable sign that something is wrong. Enough has perhaps been said to show that the Central Banker

cannot rely upon any simple rules of thumb to tell him when his intervention is needed; he must exercise judgment of the very highest order.

CONTROL THROUGH THE VOLUME OF BANK CREDIT

Part of Chapter II. was devoted to an explanation of the way in which a Central Bank can influence the size of the cash reserves of the member banks, and hence of the volume of credit they are willing to extend. If the Central Bank sells some of its investments or calls some of its loans, the primary effect will be to diminish the amount not only of its assets but also of its liabilities. The crucial item of a Central Bank's liability is the cash reserves of the Member Banks. It follows that the Central Bank, by reducing its assets, can reduce the cash reserves of the Member Banks. When the cash reserves of the Member Banks are reduced, they will find that the ratio between cash and deposits which is enjoined upon them by law or custom has been affected. Since they cannot increase their cash, they must perforce reduce their deposits, which they do by calling some of their loans. Now, bank loans and advances are made to people whose expenditure exceeds for the moment their income; there is no other purpose in borrowing money. Some of the borrowers will be people who are spending more than their income on ordinary consumption—who are, for the time being, living beyond their means. But the great majority of borrowers will be people whose excessive expenditure is not due to money spent on consumption but to money spent on extending their business in one way or another—laying in stock, building a warehouse, etc.—or to money spent on increasing their capital assets. In a word, most bank

loans finance Investment undertaken by people whose Saving is inadequate for the purpose. Consequently, if the volume of bank loans is reduced, it is reasonable to expect that Investment will be diminished relatively to Saving. We have therefore completed the chain: the reduction of the Central Bank's assets leads to a restriction of Investment, and a falling tendency of the price-level, accompanied by growing unemployment.

The converse case can easily be worked out. The Central Bank increases its assets (by buying investments or making loans), the cash reserves of the Member Banks are swollen, their reserve ratio is raised. Consequently, they expand the amount of their loans and advances, Investment rises relatively to Saving, the price-level tends to rise, and unemployment is diminished.

Purchases and sales of investments by the Central Bank take place in the open market, and are usually referred to as 'open-market operations.' What has been set out in the last two paragraphs may accordingly be called the 'Theory of Open-Market Operations.' We have stated only its barest bones, without qualifications or limitations; these must now be filled in.

The whole theory depends upon the ability of the Central Bank to raise or lower the total of its assets. Can it in fact do so? Every Central Bank is free to go into the open-market and buy securities, or sell some of its holdings of securities. But if every time it buys £100 worth of securities, one of its debtors pays off a loan of £100, the total of its assets is not increased. Similarly, if the Central Bank sells £100 worth of bonds, but at the same time has to increase its loans by £100, the total of its assets is not reduced. No one, not even a Central Bank, can prevent his debtors from redeeming their debts; and if a Central Bank wishes to make sure that a purchase of securities will increase the total of its

assets, it will frequently lower Bank Rate in order to encourage the Money Market to borrow from it, or at least not to repay its debts. This technique is usually successful, for there is usually no lack of willing borrowers if the terms of the loan are made attractive enough. Generally speaking, it is always within a Central Bank's powers to increase its assets, and thereby strengthen the reserves of the Member Banks.

The converse operation is rather a different story. To begin with, the Central Bank cannot sell more securities than it possesses. Moreover, even if it has securities to sell it does not necessarily follow that it can reduce the total of its assets, for loans may go up as the holding of securities is reduced. At first sight, it would seem easy for the Central Bank to refuse to increase its loans if it is trying to reduce its assets. In practice it is not so easy. In England the Bank of England does not, by custom, lend to the Member Banks. But it is also a well-established custom that any owner of the right grade of bill of exchange can bring it to the Bank for discount, and will not be refused. If the Bank should refuse, it would do so at the risk of starting a panic in the London Money Market and driving many of the bill brokers into bankruptcy. What it does is to lend money to all comers (or buy their bills—either operation will increase its assets), but to charge such a stiff rate of interest that the borrowers will hasten to repay the loan as soon as they can. In this way, although the Bank of England does not succeed in reducing the total of its assets at once, it knows—and every one else knows—that a reduction, and a consequent stringency of cash and restriction of credit, is in the immediate offing. The Bank of England is virtually the dictator of conditions in the Money Market, and hence of the size of the Member Banks' cash reserves.

In the United States the control of the Federal Reserve Banks over the reserves of their Member Banks is not nearly so absolute as that of the Bank of England. For not only do the Federal Reserve Banks make loans directly to the Member Banks, but any Member Bank which can present the right kind of security is entitled, by custom if not by law, to raise a loan on it. The Reserve Bank is morally unable to refuse, since the Member Banks are its proprietors and shareholders. True, it can and does raise its Bank Rate in the hope of deterring fresh borrowings. But the Member Bank can in turn raise the rate of interest it charges to its customers, and thus suffer no loss—an expedient not open to the bill broker, who is the normal borrower from the Bank of England. Experience has shown that when the Federal Reserve Banks try to reduce their assets by selling securities they are in practice frequently unable to prevent their Member Banks from borrowing corresponding amounts from them and thus preventing any restriction of their (*i.e.* the Member Banks') reserves and deposits. Similarly, if the Reserve Banks buy securities in an attempt to broaden the basis of credit, the immediate result is likely to be that the Member Banks will use the credit thus placed at their disposal to repay their loans from the Reserve Banks rather than to increase their cash reserves. If the Reserve Banks go on buying securities a time will come when all the outstanding loans will have been repaid, and further purchases of securities will then necessarily increase the Member Banks' reserves ; but before that stage is reached the Reserve Banks will have had to purchase a great volume of securities to no purpose. Even then, their intentions may be frustrated if the public is simultaneously drawing currency out of the banks in fear of an epidemic of bank failures. For example, in the year 1932 the

Federal Reserve Banks were striving to increase the volume of credit in the United States. In the course of that year they bought no less than $1,077 millions of United States Government securities. But $798 millions of the money thus put at the disposal of the Member Banks was used to repay their indebtedness to the Reserve Banks, $21 millions of gold was exported, and $88 millions of currency withdrawn for hoarding, so that only the remaining $170 millions went to increase the Member Banks' reserves.

Thus there are severe limitations upon the ability of some Central Banks to increase or reduce the total of their assets at will. Of course, if the Member Banks are aware of, and agree with, the Central Bank's policy, some of the difficulties may not arise. But in practice, the Central Bank will want to restrict credit precisely at those times when expansion and inflation are taking the bit between their teeth (for example, the years 1928 and 1929 in America), and when the Member Banks, under the pressure of their customers, are anxious to expand their loans to the limit. And Central Bank expansion policies are commonly undertaken at times (*e.g.* 1932 and 1933) when the Member Banks find difficulty in prudently expanding the scale of their operations.

Let us, however, disregard this difficulty and, assuming that the Central Bank is able to influence the size of the Member Banks' reserves in the way and to the degree it wishes, pass on to the second qualification to the Theory of Open-Market Operations. If the Member Banks' reserves are raised or lowered, does it necessarily follow that the Member Banks will take steps to expand or restrict credit?

Let us first take the case of a reduction of Member Bank reserves. In many countries, notably the United

States, Member Banks are required by law to observe a minimum ratio between their deposits and their reserves. In normal times banks will tend to keep their reserves down to these minimum ratios, for cash is the only form of asset which does not earn interest and contribute to the bank's profits. In England the conventional reserves are not enforced by law, but the penalty of being suspected of unsound banking is as effective a sanction as any prescribed by the courts. For these reasons it may be taken as an established fact that if the Central Bank succeeds in *reducing* the reserves of the Member Banks, the Member Banks will take steps to reduce their deposits. This can only be done by reducing their assets. Loans cannot be called overnight, and the first step of the Member Banks will doubtless be to sell some of their investments. But readily saleable investments are their second line of defence and, for safety's and liquidity's sake, they will be unwilling to reduce investments and leave loans untouched. Advances falling due will therefore not be renewed and new applications for loans will be more stringently scrutinized until the desired proportions of cash, investments, and loans to total deposits have been re-established. A *reduction* in reserves will therefore ordinarily lead to a *restriction* of loans and a *diminution* of Investment.

It does not, however, necessarily follow that an *increase* in Member Banks' reserves will lead to an *expansion* of loans and an *extension* of Investment. In the first place there is no law that would prevent a bank from allowing the extra cash to pile up and increase its reserve ratio, or would force it to add to its deposits. Nor does custom stand in the way, for if the banker keeps excessive reserves he is not suspected by the public of bad banking, but only by his shareholders of insufficient attention to their dividends—a less formidable danger.

In normal times, however, a banker will not keep more cash than he deems prudent and necessary, but will invest it in some way so as to earn interest. In normal times, therefore, an increase of reserves does lead to a proportionate increase in deposits. In Great Britain, fortunately enough, the times have been normal in this respect for many decades, and consequently when, as a result of the operations of the Bank of England, the combined cash reserves of the London clearing banks increased from £191 millions in June 1932, to £213 millions a year later, the deposits of the same banks increased in almost exactly the same proportion from £1,764 millions to £1,978 millions. In the United States, on the other hand, times have not always been normal. In the depression of 1929–33 distrust of the banks was rife throughout the country and actual failures were numerous. No bank in such circumstances can be confident that it will not have to withstand a run next day, and it will correspondingly be anxious to have cash on hand to cover as large a proportion of its deposits as it can. The American banks' habit of holding excessive supplies of cash has outlived the period of bank failures. Since 1933 there have been very few failures, but the Member Banks have consistently held much more cash than they need. Throughout the years 1934–39 gold was pouring into the United States from frightened Europe and being bought by the Federal Reserve Banks. This acted, of course, in just the same way as the acquisition of any other form of asset by the Central Bank—*i.e.* it increased the Member Banks' assets. By this means the total reserves of the Member Banks increased from $3,790 millions in June 1934 to $10,085 millions in June 1939, that is, by 166 per cent. But the deposits of the Member Banks increased over the same period only by about 50 per cent., and as much as $4,246 millions of their

reserves at the later date were 'excess to requirements,' in spite of the fact that the minimum requirements of the law had been sharply increased in the interval. Unfortunately, periods when confidence and enterprise are so lacking are likely to be precisely those in which an expansion of credit would be most desirable if it could be brought about.

Several suggestions have been made in recent years for increasing the influence of the Central Bank over the deposits of the Member Banks. The Macmillan Committee suggested in 1931 that the Central Bank should have the power to alter the ratio of reserves to deposits which the Member Banks must observe, and the American authorities were given this power in 1933. This power is obviously an assistance to the Central Bank. If it wants to contract credit, it can raise the required percentage of reserves, without going to the trouble of selling securities on the open market and inducing a decline in the Member Banks' reserves. Conversely, if it wants to start an expansion it can decree a reduction in the reserve percentage, always provided, of course, that it keeps within the bounds of prudence. A more subtle suggestion is that the Member Banks' reserve requirement should vary not only with the total amount of its deposits but also with their velocity of circulation. This would mean that as the velocity of circulation increased, the reserve percentage would be raised, and vice versa. In the algebraical terms of Chapter IV., as V rose M would decline, keeping MV fairly constant.

Both these suggestions would cut out the necessity for open market operations and allow a direct influence to be brought to bear on Member Bank *reserves*—in the one case at the discretion of the Central Bank, in the other automatically. But they would not lead to a direct

determination of Member Bank *deposits*. If the reserve ratio were increased and the banks could obtain no more cash, they would have to diminish their deposits. But if the ratio were decreased, there would be no compulsion on them to increase their deposits. In other words, these suggestions would get round the first of the difficulties we have encountered, but not the second. We still have to allow for the fact that if there is little confidence in the banking system the Central Bank may be unable to induce an increase in Member Bank deposits. There is yet a third difficulty to be mentioned. Even if the Central Bank is successful in increasing Member Bank deposits, it still does not follow that loans, and Investment, will be stimulated.

If deposits increase, the total of assets must increase correspondingly, since the two sides of the balance-sheet must be equal. But loans are only one item of the assets. True, the banks will *want* to increase their loans, since the rate of interest on loans is higher than on the other forms of bank asset. But if no one will borrow, loans cannot be increased, and the banks will be forced to obtain the increase in their total assets by increasing their holdings of securities. This can be illustrated from the British banking statistics of the period already mentioned. It has been shown that the total deposits of the London clearing banks increased by £214 millions between June 1932 and June 1933. But in the same period the total of loans and advances actually *fell* by £77 millions. Investments increased by £205 millions. The 'cheap-money' campaign of the Bank of England had manifestly not succeeded in stimulating an increase of Investment, financed by bank credit.

Thus each of the three links in the chain of the Theory of Open Market Operations is a weak one.

The Central Bank may not be able to change the volume of the Member Banks' reserves. Even if this first link holds, the Member Banks may not alter the total of their deposits in proportion to the change in their reserves. And even if deposits are altered in the correct proportion, it does not follow that they will be altered by a rise or fall in loans and advances, which alone are likely to affect directly the volume of Investment. But the power of the Central Bank to expand and restrict is not equal. If the first link holds—if, that is, the Central Bank has the power to determine the size of the Member Banks' reserves (a power possessed by the Bank of England, but likely to elude the Federal Reserve Banks, and some other Central Banks, when they most need it)—it can usually bring about a *restriction* of bank loans. Its power of inducing an *expansion* of bank loans, on the other hand, is severely limited ; it can—in normal circumstances—force the Member Banks to put a plentiful supply of water in front of the public horse, but it cannot force him to drink. In rough and ready language, Open Market Operations can stop booms, but they cannot stop slumps.

CONTROL THROUGH THE RATE OF INTEREST

The second weapon of the Central Bank for influencing the volume of Investment and Saving is its power to raise and lower the rates of interest paid for saving or charged for investments. If Investment is in excess of Saving, the Central Bank can raise the rate of interest. This will have the effect of reducing the number of profitable projects of Investment, while at the same time it will to some small degree stimulate the volume of Saving. If Investment is falling short of Saving, a reduction of the rate of interest will stimulate Investment

and restrict Saving. There is always—at least in theory—some rate of interest which will make Investment and Saving equal. The task of the Central Bank is to discover that rate and apply it. This is, in brief, the Theory of Interest Rates. As in the case of the Theory of Open Market Operations, having stated the theory, we shall proceed to outline the practical obstacles to its application.

Before doing so, however, it may be observed that the two weapons in the Central Bank's armoury, its control over the volume and over the price of credit, work in close relation with each other. We have already seen that the Central Bank will find it advantageous to reinforce a policy of buying securities and increasing the Member Banks' reserves by lowering Bank Rate, and vice versa. It remains to be observed that a reduction in interest rates will, other things being equal, increase the demand for bank loans and hence make it easier to increase their amount, which is the primary object of the expansive open market operation. The converse also applies : if the Central Bank is trying to raise interest rates, its efforts will be more likely to be successful if at the same time it is contracting the volume of bank credit, so that those who need loans have to compete for them and raise the price, *i.e.* the rate of interest. The two policies thus work hand in glove, and one will usually be reinforced by the other. Nevertheless, they are logically distinct expedients which can within certain limits be pursued independently.

The first difficulty is that of determining exactly what rate of interest would make Investment and Saving equal. It must be remembered that neither of these quantities is susceptible of exact calculation, or even of approximate estimate, except with a delay of several months. The Central Bank may have reason to believe that a position

of disequilibrium is developing. Even this deduction, as has been remarked before, is not a simple matter : it depends upon assumptions as to what the behaviour of prices would be if equilibrium could be maintained, and it involves careful observation and assessment of the trends of innumerable spheres of enterprise. But supposing the Central Bank were able to convince itself that an inflation was developing (*i.e.* that Investment was beginning to exceed Saving), or alternatively, that a deflation was setting in (*i.e.* that Investment was beginning to fall short of Saving), it would still have to answer the question : exactly what change in the rate of interest would be necessary to correct this incipient disequilibrium ? There is nothing to guide the Central Banker in answering this question save his intuition and experience. It is only to be expected that he should guess wrong as often as he guesses right.

The difficulty of determining on the correct equilibrium rate is increased by the fact that it may be far higher or far lower than public opinion, and even the Central Banker himself, would be prepared to regard as reasonable. If the inflation has got well under way, a very considerable rise in interest rates might be necessary to check it. There are two reasons for this. In the first place, if the inflation is well-developed, prices will, almost by definition, be rising. The prices of industrial securities will certainly be rising, and possibly quite fast. If the average industrial share is paying dividends to yield 6 per cent. per annum and is also rising in price at the rate of 5 per cent. per month, a speculator can afford to borrow money for investing in securities and pay interest at the rate of 66 per cent. per annum, without losing on the transaction. It is true that buying investments in this sense is not the same as Investing in the special sense defined on page 149. But the profits of the

Stock Exchange speculator are only an extreme example of the profits to be made in such periods by every one who can take advantage of rising prices. The rate of profit to be earned on genuine Investment (in the special sense), though it may not be as high as 66 per cent., may still be much higher than any rate of interest that the banks are willing to charge. The second reason is that a period of inflation is one of boundless optimism. It may be that if the rate of interest were raised to, say, 8 per cent. the prudent man who could accurately foresee the future would stop Investing. But, in fact, in such periods very few men are prudent, and nearly all of them see the future through rosy spectacles. Interest rates may therefore have to be raised very high, because the rise of prices makes the profits of Investment, first, *in fact* very great, and second, *in the minds of Investors* even greater.

The converse case is, of course, equally true. If a deflationary movement has reached an advanced stage of development, prices will be falling and disappearing. In these circumstances, the profits of Investment will be reduced *in actuality* by the falling price-level, and *in semblance* by the prevailing pessimism. Yet nobody borrows money for Investment, unless the prospective profits are at least as great as the rate of interest payable on the loan. Indeed, in an advanced deflation there is probably no positive rate of interest which will sufficiently stimulate Investment. To make Investment equal to Saving, the banks would have to charge a *negative* rate of interest, that is, actually pay borrowers to borrow money. No banking system is prepared to go to these lengths in pursuit of public policy. It may be remarked in passing, in anticipation of a later comment, that these considerations only apply if the inflation or deflation, as the case may be, has reached an advanced

stage, when all its cumulative forces are pressing it irresistibly onwards. If the Central Bank can intervene in the earlier stages, relatively small increases or decreases of the rate of interest will produce the same effects as very large alterations would be required to effect at a later stage.

The only rate of interest over which the Central Bank has direct control is that known as 'Bank Rate.' 'Bank Rate' is the rate of interest charged by the Central Bank for loans made by it either to its Member Banks (in the United States) or to the Money Market (in England). But these loans are not used for Investment; they are used for keeping solvent, or for keeping within the provisions of the law as regards cash reserves. A reduction of Bank Rate will only influence the volume of Investment to the extent that it is followed by a reduction of the rate of interest actually paid by Investors. How far is it so followed?

Investors borrow the money with which they do their Investing in two main ways. One is, as we have seen, by borrowing the money from a bank. Now, within certain limits, the rates charged by banks for loans do move up and down with Bank Rate. Thus the conventional rate in Great Britain is usually 2 per cent. above Bank Rate, but—and the qualification is of supreme importance—with a minimum of 4½ or 5 per cent. Whenever Bank Rate is above 3 per cent. the rate on loans will move up and down with it. But when Bank Rate falls below 3 per cent. the rate on loans sticks at 5 per cent. It is only in periods when Bank Rate falls well below 3 per cent., and stays there for a long time,[1] that the rate of interest charged by the banks falls below 5 per cent. In the United States the

[1] As in recent years.

relationship cannot be precisely stated, owing to the multiplicity of banks and banking practices, but it is broadly the same as in Great Britain : when the Bank Rate is high the rate charged by the member banks for loans follows it up and down very faithfully, but when Bank Rate falls below a certain level the connection is broken. The reason for this is that a bank depends upon its interest earnings for its profits. Much the greater part of its expenses are fixed—the rent of its buildings, the wages of its employees, etc.—and only the smaller part of them consists of interest paid to depositors, which, of course, falls with Bank Rate. With expenses fixed, there is a point below which the bank cannot allow its income to fall. So far, therefore, as Investment by means of bank loans is concerned, the Central Bank can almost always effect an *increase* in the rate of interest charged, but its power to compel a *decrease* is severely restricted.

The second main way in which money is borrowed for Investment is by an issue of securities on the capital market. Securities issued in this way, if they are to attract the public, must offer a yield (that is, a rate of interest on the sum invested) at least equal to the yield that can be obtained on existing securities of the same class and involving the same risk. The public will not be tempted to buy a new issue of the U.V.W. Motor Co. to yield 4 per cent., if the shares of the X.Y.Z. Motor Co. (whose prospects are equally rosy) can already be bought to yield 4½ per cent. The rate of interest at which money can be borrowed by means of an issue of securities depends therefore upon the yield of existing securities ; and the yield of existing securities depends upon the prices at which they are quoted on the Stock Exchange, a high price involving a relatively low yield, and vice versa. The Central Bank will consequently be able to

influence the rate of interest at which money is borrowed for Investment by this second method only if it can influence the prices of existing securities. Does a reduction in Bank Rate lead to a rise in the price of securities on the Stock Exchange, an increase in Bank Rate to a fall?

The interaction between Central Banking policy and the level of Stock Exchange prices is one of the most controversial and complicated, as it is also one of the most interesting, sections of monetary economics. The thread of the argument of this chapter cannot be interrupted here longer than is necessary merely to indicate some of the connections. The immediate effect of a decrease in the Bank Rate of the Bank of England is to lower the yield that can be obtained on bills of exchange and the other forms of 'paper' (*i.e.* evidences of indebtedness) which circulate in the Money Market. Many people who have previously been investing in bills will, in consequence of this lower yield, buy Government bonds instead. The demand for these bonds will increase, their price will go up, the yield that can be obtained on them will fall. Moreover, if the Bank of England has backed up its reduction of Bank Rate by making open market purchases, it will itself have swelled the demand for gilt-edged securities. Furthermore, as a result of this open-market operation the Member Banks will be seeking to expand their assets and, in default of a sudden increase in loans, will also turn to the gilt-edged market. For these reasons, a reduction of Bank Rate is almost always followed by a rise in the price, and a fall in the yield, of Government securities.

But the yield on Government securities may appear to have little direct relevance to the rate of interest at which business men can borrow money for Investment;

that depends, as we have seen, on the yield of the securities of comparable enterprises. In normal times, however, there is a connection between the prices of different sorts of securities. For if the yield on gilt-edged securities falls, some people may prefer to buy securities with a slightly higher risk but a higher yield. As these in turn rise in price, the public begins to turn its attention towards securities with still greater risks and higher yields. In this way the initial impetus is transmitted down the line until it reaches the securities of industrial companies. When it has arrived there, the time is ripe for issues of industrial securities and the consequential increase of Investment in the special sense in which we are using the word in this book. Moreover, the rise in the prices of securities increases the value of companies' reserve funds (which are usually invested in marketable securities), while it also lowers the income that can be earned on any fresh sums put to reserve. Thus companies get a double encouragement to take money out of their reserves and spend it on extending their plant or in other forms of Investment.

Thus movements of Bank Rate do affect other rates of interest, including those that are most directly relevant to Investment. They are more likely to do so if they are supported by Open Market Operations. The ultimate object of Open Market Operations is to influence the *volume* of credit. But in attaining this object they compel the Member Banks, and the Central Bank itself, to push up the price and push down the yield of gilt-edged security. A Central Bank operates, in practice, through the volume of credit and the rate of interest simultaneously. In fact, the tendency of recent years has been to use this means of influencing interest rates far more frequently than Bank Rate itself. Bank Rate is a very powerful weapon, but it tends nowadays

to be kept in the background as a sort of fulcrum on which interest rates can be levered up and down by more delicate methods. Only when some major change is necessary is Bank Rate itself moved.

The Central Bank thus has a high degree of control over the rates of interest that prevail in the Money Market and in the market for gilt-edged securities. In normal times, these rates of interest exercise a powerful attraction on other rates—of which we are most interested in those that influence Investment. But, in abnormal times, the chain is broken. When business is exceptionally prosperous and there seems to be no limit to the increase of profits (in other words, in a period of inflation), gilt-edged securities and the ordinary shares of industrial companies are not looked upon as the two extremes of a graduated series of securities, differing from each other only in the amount of risk involved in them, but as alternatives differing in kind. Gilt-edged securities—and, indeed, any securities whose rate of interest is fixed—are then out of favour, for they cannot share in the rise of industrial profits. And the fact that dividends on ordinary shares can only be paid out of profits, which in more normal times constitutes the risk of investing in such shares, is now considered to be a positive advantage. Consequently, it sometimes happens at such periods that the price of bonds may fall while the prices of ordinary shares advance. For analogous reasons, at times of deep depression, and even deeper pessimism, a rise in bonds may entirely fail to stimulate the market for ordinary shares. In such abnormal times, therefore, the influence of movements in Bank Rate upon movements in the yield of industrial securities, upon which depends the possibility of raising money for Investment by issuing new securities, may be comparatively slight. Unfortunately, it is precisely at such

times that the need of an effective banking policy is greatest.

The Theory of Interest Rates, like the Theory of Open Market Operations, is therefore subject to great practical limitations. Even if the rate of interest which would make Saving and Investment equal could be precisely determined, the Central Bank has no direct control over the rates of interest that have to be paid by those who wish to undertake Investment, and its indirect control, though considerable, is slow in operation and liable to break down at crucial periods. This brief survey of the practical limitations of banking policy leads us to the conclusion that even if the Central Bank knows precisely how much Investment should be stimulated or restricted in order to bring it into accordance with Saving, and even if it employs all the weapons at its disposal for achieving this degree of stimulation or restriction, it may yet be unable to do so.

PRACTICAL POSSIBILITIES

Banking policy is not, however, completely impotent. We have pointed out its limitations, but these limitations do not entirely inhibit it from successfully taking any action at any time. In particular, two conclusions of great practical importance may be said to have emerged from the preceding discussion.

The first of these is that the power of the banking system *to limit an inflation, to stop a rise of prices*, appears to be considerably greater than its power of arresting a deflation or fall of prices. There are many reasons why this is so. No one can prevent the public from suddenly increasing its Saving or diminishing its Investment (either of which would produce deflation),

for neither action needs the concurrence of other parties. But an *increase* of Investment usually involves an increase of borrowing from the banks, and their concurrence is therefore necessary. By refusing to create new money they can bring the inflation to an end. But in the opposite circumstances, as has been shown at great length, the mere willingness of the banks to create new money does not mean that the new money will actually be created and spent on Investment. Similarly in the case of movements of the rate of interest. A sufficiently high rate of interest (provided it can be made effective) makes Investment unprofitable and will therefore bring it to a speedy end. But a fall in the rate of interest will at best only increase the chances of making profits out of Investment, and if confidence in the future is lacking, profitable projects may go a-begging for some one to take the risk of financing them. In brief, it is far easier to frighten the public that its Investment will not bear the fruit of profits than to allay those fears.

The second lesson that can be drawn from the discussion is that corrective measures are far more likely to be successful if they are undertaken early in the movement. Either an inflation or a deflation, if left to itself, will gather momentum very quickly. Rising prices lead to greater profits, which result in still more Investment. Falling prices lead to losses, which still further diminish Investment. Rising unemployment leads to a lower demand for goods of all sorts, to a further fall of prices and still further unemployment. Rising prosperity means freer spending and a further rise of prices. Both optimism and pessimism feed on themselves. When either inflation or deflation has got properly under way, its impetus and momentum may be so great that there is nothing to do but let it blow itself out. On the other hand, in the earlier stages, a much gentler technique

may be effective. At the beginning of a deflation, for example—when prices have begun to sag and unemployment is beginning to increase, but before confidence has been undermined or the community has had the deadweight of a quarter of its working population thrust upon it for support in their idleness—quite a small fall in interest rates together with a small increase in the volume of credit may suffice to induce an expansion of Investment and the maintenance of equilibrium. Similarly in the case of an incipient inflation, a relatively slight restriction of credit may be enough to restore the balance between Savings and Investment. The difficulty of applying this lesson is, of course, the difficulty of diagnosing what is happening until it has already happened. Economic phenomena take some time to declare themselves and to be translated into the statistics which reach the Central Banker's desk. His counter-measures, in turn, take time to develop, and by the time they become effective the original disturbance may be very deep-seated.

If it is easier to stop inflation than deflation, and easier to kill either when it is young and tender, the line of least resistance for the Central Banker would seem to be to keep himself on the alert for an incipient inflation and scotch it at birth. Apart altogether from the practical difficulties, this is demanding a great deal of courage from the Central Banker. For booms, though they eventually lead to over-expansion and depression, are very pleasant while they last. Profits rise, there is employment for all, the standard of living increases rapidly, everything seems for the best in the best of all possible worlds. Is the Central Bank to veto this delightful existence? The economist, with his eyes on history, taking thought not only of the slump that is past but of the slump that is to come if inflation is allowed to go its way unimpeded, can cheerfully say yes, knowing

that a slower and surer rate of progress will produce the maximum of happiness and the minimum of distress. But the Central Banker is in the limelight of politics ; in many countries he owes his appointment to the government of the day, and in no country can he afford to disregard the current of public opinion. And politics knows no to-morrow. In the circumstances, the Central Banker will be only human if he defers his decision, hoping that his diagnosis may be proved wrong and that it may not be necessary to limit the growth of optimism. But delay is fatal, for the longer he allows the boom to go its way, the smaller will be his chance of correcting it. The stage of the business cycle at which Central Banking policy has most chance of success is, then, the stage at which it is humanly and politically hardest for the Central Banker to take resolute action. A study of monetary history justifies the statement that booms—or, for that matter, slumps—are never checked early enough.

We must be careful not to simplify the problem too much. It is not as if we were discussing the problem of banking policy in a virgin world which knew neither boom nor slump. The world is already habituated to the rhythm of inflation and deflation, each running to excess and each in turn giving birth to the other. It is not as if the pendulum were at rest at the middle of its swing and our task were to prevent any disturbance of that balance. The pendulum is swinging very violently, and our problem is to halt it. But it is no use to halt it at whatever point it may have reached, even if that could be accomplished. There is no point in perpetuating the instabilities of the slump, and no possibility of perpetuating those of the boom. It follows that for most of the time the Central Bank is not preserving equilibrium, but striving to produce one disequilibrium to offset

another. If inflation is developing, the Central Bank tries to set in motion the forces of deflation ; if deflation is in the ascendant, the Central Bank strives to inflate. At the bottom of a slump, the Central Bank will take action which, if adopted in a normal period, would produce the wildest inflation. And in fact it *does* produce inflation, if it is successful ; for when deflation has gone to the lengths which it had reached, for example, in 1931–32, a stiff dose of inflation is essential before the normal level of activity can be regained and the restoration of equilibrium become desirable. Similarly, at the height of a boom some measure of deflation, some pricking of inflationary bubbles, is an essential preliminary to the restoration of sanity and balance. The task of the Central Bank, therefore, is not one of looking out for, and scotching, incipient causes of disturbance emerging from the shifting sands of public psychology, but of trying to bring to rest a seesaw in violent oscillation. To throw its weight on to the leg of inflation is obviously right at one time, but disastrous at another ; to throw an equal weight on each leg is the right policy only for the shortest intervening period. In the world as it is, the Central Bank should always be either inflating or deflating. To change at the right moment from the one to the other needs the greatest agility and the utmost promptness in reversing the course of policy.

Agility and promptness, however, are hard to come by in the sphere of Central Banking policy. We have already touched upon some of the difficulties the Central Banker has to face in making up his mind and some ot the hesitations which will beset him in attempting to follow the course of action he has chosen. But even if he can reach a correct diagnosis at an early stage, even if he meets no opposition, political or technical, he still cannot expect to produce results overnight. Let us

suppose that the Central Bank wishes to expand credit and encourage Investment. Its policy will be to lower Bank Rate and to expand its holding of securities. In this way the Member Banks will be enabled to offer more plentiful supplies of credit at lower rates of interest. But even this preliminary stage will take several months to accomplish. The effects of cheap and plentiful credit will be felt first in the Money Market, and will spread only slowly to the market for new loans. And even when this spreading wave of monetary ease has reached the banking periphery where the Investor is to be found, more months must be allowed for him to make plans to seize his opportunity. After he has arranged for the finance of his Investment, he will begin to spend money. Then, and then only, will the effect on prices and unemployment begin to be felt. Tradesmen will begin to increase their stocks (a potent form of Investment), the feeling of optimism will grow, and the snowball of inflation will begin to gather. A restriction of credit has more rapid effects, as we should expect, in view of the greater efficacy of banking policy in general in checking an expansion. But even if it were possible for the Central Bank to kill overnight all new projects of Investment, those projects which had already been started would continue. Many months would elapse before the forces of expansion had entirely given place to those of contraction.

There is, consequently, even at the best of times, a considerable interval of time between the inception of even the most resolute Central Banking policy and its fulfilment. Add this cause of delay to the difficulties of diagnosis and to the procrastinations imposed by politics, by the need of convincing or overcoming opposition or by mere natural hesitancy, and the limitations of Central Bank control become apparent.

It is not an exaggeration to say that most of the energies of Central Bankers are now consumed, not in resisting those natural economic tendencies which produce booms and slumps, but in counteracting the belated effects of their own previous policy. An example may be taken from the recent history of the Federal Reserve system in the United States. A policy of expansion adopted in 1927, though doubtless correct at the time, was maintained for so long that it contributed to the creation of one of the most astonishing inflations ever witnessed. By the time the various factions in the Federal Reserve system could make up their minds to curb and restrict this expansionary movement, it had already burnt itself out. The raising of Bank Rate and restriction of credit in the late summer of 1929 did not, consequently, arrest the boom, they gave added strength to a slump which was already incipient. Once more the opposite course of expansion was not wholeheartedly adopted until the beginning of 1932, two years too late.

The task of Central Bankers is, it will be seen, an immensely difficult one. It is probably as much as can at present be hoped that their influence will in future be cast on the right side, rather than the wrong side, of the balance. Until at least that is achieved, any thought of curing the alternations of prosperity and depression by means of banking control is widely premature.

This is a pessimistic conclusion to our survey of the scope for banking control. It would be less than frank not to acknowledge it as such. But it does not mean that nothing can be done. On the contrary, there is room for a vast improvement in the theory and practice of banking policy. Few Central Banks are sufficiently aware of their responsibility for the material welfare of their fellow-citizens. Fewer still are equipped to reach wise and

prompt decisions, and having reached them, to apply them by every means in their power. One of the tasks of the immediate future is to increase the responsibility of the Central Bank, to induce it to concentrate its powers on the quest for equilibrium, to act not merely in periods of crisis, but at all times as the governor and safety-valve of an economic mechanism which is constantly prone to get out of hand. These are qualities which must ripen in experience and which cannot be enforced by legislation. Additional state control of the Central Bank may, indeed, be necessary in countries such as Great Britain where that control has hitherto existed only in a rudimentary form. But state control which detracted from the ability of the Central Bank to make its own independent decision on the correct policy to pursue, or which hampered its freedom of action in pursuing that policy, would do far more harm than good. The perfect Central Bank would have the duty of nearly always swimming against the current of public feeling, for it is the current of public feeling, alternately over-optimistic and over-despairing, which is more responsible than any other single factor for the swings of boom and slump. State control which attempted to ensure that the policy of the Central Bank should always be popular with a democratic electorate would consequently be a disaster.

Apart from raising the level of Central Banking responsibility and competence, much could be done to improve the mechanism of control. It is no part of the task of this book to draft a scheme of reform, and only a few directives can be indicated here. It would be desirable, in the first place, to achieve a greater unity of purpose between the Central Bank and the Member Banks. At present a large part of the Central Bank's energies are devoted to coercing the Member Banks into

compliance with its policy. This is in part to be ascribed to divergences of interest; but in part it is due to insufficient realization on the part of the Member Banks of their responsibility to the community for the application of a prudent policy, and to insufficient willingness of the Central Bank (in England at least) to take them into its confidence. Whatever the cause of this divergence of views, it is clearly unfortunate that the banking system should so rarely be unanimous in its policy. It might be added that the financial policy of the Treasury often exercises a powerful influence on the course of events. In England, the Treasury and the Bank of England are in close and daily contact, with the result that the day-to-day details of Treasury financing are so arranged as to interfere as little as possible with the monetary policy of the Central Bank. But the same cannot always be said of the longer-range budgetary and debt policies of the Treasury. When the total of the Budget (even in peace-time) is one-fifth the National Income, and the National Debt nearly twice the National Income, it is essential that fiscal policy should be very carefully co-ordinated with monetary policy.

In the second place, as was noted earlier in this chapter, control of the trade cycle would at once become easier if it were possible directly to control the volume of Investment. Our present system of indirect checks and enticements is slow, unsure, and cumbrous. Investment can only be reduced by enforcing losses on the whole business world; it can only be increased by an elaborate chain of lures and temptations to the wary Investor. There is paramount need for some centralization of Investment which should be able, not merely to restrain excessive Investment or discourage imprudent schemes, but also to undertake the more constructive task of initiating Investment when the public is hanging

back. Those who advocate large schemes of public works in times of depression are feeling their way towards this solution. But there is no reason why stop-gap Investment should be confined to roads and bridges, Town Halls and schools. A period when Investment falls short of Savings is not merely one of stagnation and distress, it is one when opportunities of increasing the productive capital equipment of the community are being missed. Perhaps the greatest economic task of the years immediately before us is to improvise a technique by which the community, acting consciously and with the end of monetary stability definitely in view, will be able to control both the volume and the direction of its own Investment.

Much, then, remains to be done. But banking policy, even with the aid of controlled Investment, will never be sufficient by itself to bring economic Utopia into being. Its first task should be to prevent the natural instability of a complex credit system from increasing the amplitude of economic fluctuations. Its second task should be to attempt deliberately to offset some of the causes of disturbance which are beyond its control. But for those causes themselves we must look outside the realm of money. Money, organized in the perfect banking system and controlled by the omniscient Central Bank, could do no more than give effect to the wishes and emotions, the fears and hopes, the timidities and stupidities of Man. Money was invented as a useful tool of Man's intelligence, and it has never been more. If Man is determined to wage wars, Money cannot prevent economic loss from emerging. If Man is determined to place barriers and obstacles in the way of that free interchange of goods by which he has raised himself to his present high economic estate, Money cannot prevent chaos and suffering from resulting. If Man is determined

never to look further than the immediate results of his actions, Money cannot prevent the more distant effects from being distressing. Money, as the perfect servant, can *only hope not to* add *iniquities of its own to* those of its master.

Chapter VII

THE FOREIGN EXCHANGES

FOREIGN CURRENCIES

MONEY ultimately derives its value, as we have seen, from the fact that people are prepared to accept it in payment for goods and services. It may be composed of metal which is precious in itself, or it may have attached to it the privilege of legal tender. But neither of these qualities is essential to the definition of money, and, in fact, the great mass of monetary transactions within Great Britain is accomplished by means of paper documents which are not legal tender. If a resident of London seeks to discharge a debt to a resident of Glasgow, payment by coin, by banknote, or by cheque will be acceptable. Indeed, of the three the cheque, being the most convenient, will be the most acceptable, provided it is drawn on a bank known to the creditor by a debtor whose solvency he has no reason to doubt. Thus the acceptability of cheques qualifies them as money and vastly facilitates the course of business.

In the remainder of this book we shall be dealing, in the main, with financial transactions which cross the borders of the state and involve the international transfer of money. And at the very outset we must make the observation that there is no substance, no means of payment, which is acceptable in settlement of debts throughout the world. There is no international money. To this statement there would have been in previous

ages one exception in favour of gold. We shall have to devote an entire chapter to elucidating the rôle played by gold in the international currency system. Gold has value in every country of the world, and its connections with the various national currencies is close. But in the conditions of the modern world gold is not an international money, at least so far as the man in the street is concerned. The British importer of American cars, the Indian purchaser of British steel, the Argentine railway company remitting a dividend to its shareholder in Cheltenham—none of these make their payments by shipping bags of gold about the surface of the globe. Throughout this and the succeeding chapters we shall find gold constantly intruding as a special case, or as an exception, in the general exposition of the nature of foreign exchange. But the cases in which gold is used are so few, relatively to the bulk of international transactions, that we can safely ignore them so far as the main thread of the argument is concerned.

We return, then, to the statement that there is no form of money which is acceptable internationally. A Belfast linen manufacturer who sells linen to a London merchant will be glad to receive payment by cheque or by banknotes or, indeed, if the purchaser wishes, in coin. Any of these are useful to him, they represent pounds, shillings, and pence, with which he can buy flax or pay the wages of his employees. But let us suppose that instead of selling his linen to London he has sold it to New York. How can he receive payment? The American purchaser will have dollar notes; but they are of no use to the Belfast linen manufacturer, for neither his flax merchant nor his employees are willing to be paid in dollar banknotes. The Belfast man would be glad to have pound notes; but the New York merchant does not, in the ordinary course of his business,

come into possession of any pound notes. Nor is the matter any simpler if payment is made by cheque. The American's cheque will be unacceptable to the Ulsterman, for it will be drawn on a bank of which he has never heard in a currency that is of no use to him.

Now in practice, of course, these difficulties would not present themselves. The Belfast manufacturer, on receiving a dollar cheque on a New York bank, would merely deposit it in his Belfast bank and receive in exchange a deposit reckoned in pounds, shillings, and pence. But this only shifts the responsibility. What use can the bank make of dollars and cents? Neither its clerks nor its depositors nor its shareholders are prepared to receive dollars in payment of their various claims upon it. The bank cannot afford to accumulate useless dollars; it can, therefore, afford to give pounds in exchange for dollars only if it, in its turn, can exchange the dollars into pounds again. The Belfast bank will, therefore, exchange its dollars into pounds by selling them to a London bank. But if so, the dollars will not yet have reached the hands of any one to whom they are directly useful. The process of exchange will, therefore, come to an end only when the dollars are sold to some one who is willing to take dollars in exchange for pounds, not merely for the purpose of further exchange, but because he himself has a use for dollars. The only people who have any use for dollars are residents in the United States or those who have payments to make to, or wish to accumulate balances in, the United States; and, similarly, the only people who have any use for pounds sterling are residents in the United Kingdom,[1] or those who have payments to make to the United Kingdom.

[1] Or, of course, residents of any of those parts of the British Empire where the pound sterling serves as currency.

This, then, is the first guiding principle of foreign exchange : each country has its own money, and though each national money is freely accepted within the borders of that country, no national money is freely accepted outside its own country. And it follows as an obvious deduction that all payments which cross a frontier must involve an *exchange* of one money for another. If the New York merchant is to make his payment to the Belfast manufacturer, either the American must acquire pounds in exchange for his dollars and forward them to Belfast, or else the Belfast man must exchange the dollars he receives into pounds, which alone are of use to him. In either case an exchange of currencies has taken place.

This reasoning is, of course, platitudinous in the extreme. But it is nevertheless worth while to dwell upon it, for it is absolutely fundamental to any understanding of the international working of money, and many popular fallacies are based upon ignorance of it. An exchange must, of course, have two parties ; dollars cannot be exchanged for pounds unless at the same time pounds are exchanged for dollars. And as cash payment involves two parties, a payer and a receiver, it follows that most international monetary exchanges involve four distinct persons, two payers and two receivers. This process of exchange is often loosely referred to as ' conversion ' ; one speaks of ' converting ' dollars into pounds at such-and-such a rate of exchange, of the ' conversion ' of francs into guilders, and so forth. The word may give rise to a serious misunderstanding. The miller converts wheat into flour, the baker converts flour into bread. But these are operations very different from the exchange of currencies. The miller, when he converts grain into flour, does not have to seek out somebody who wants to convert flour into grain ; nor

does the baker have to find people who wish to convert bread into flour. But there is no means by which the owner of a pound note can 'convert' it (in the miller's or the baker's sense) into one or more dollar notes. True, he might use it to buy something, ship that something to America, and there sell it for dollars. But that would be two acts of exchange, not one of conversion. 'Conversion,' when used of currencies, *always* means exchange.

Another example of the same misuse of language can be drawn from the familiar phrase referring to 'money coming into London' or 'money being withdrawn from London.' The only way in which money can literally come into Great Britain is by the physical importation of pound notes (or, in the special circumstances of the gold standard, gold). What is almost always meant by an 'inflow' or 'outflow' of money is that foreigners are acquiring pounds in exchange for their own currencies, or that they are exchanging pounds back into their own currencies. There is no more money in London as a result of an 'influx of foreign money' (unless, indeed, the Bank of England or the other banks happen to have created more money, which is, of course, an entirely different matter), and no less money as the result of a 'flight of foreign capital.' All that has happened is that a greater proportion (in the case of an 'influx') or a smaller proportion (in the case of a 'withdrawal') of the total of British money belongs to foreigners than before the 'inflow' or 'outflow.' Why foreigners choose to own more or less British currency is a matter with which we shall be concerned shortly; here the points to be noticed are that British currency is only of use to them for spending in Great Britain, and that the only way they can acquire or dispose of it is in *exchange* for their own national currencies.

Still another instance of the way in which the principle of exchange is ignored will be of use. Some years ago, when the problem of German Reparations was still a vital controversy, travellers returning from Germany would frequently argue that the German pleas of inability to pay must be insincere, as there was obviously a great deal of money in Germany. Night clubs in Berlin were thronged, they would say, and expensive cars numerous on the streets. But the night club bills were paid, and the cars bought, with marks, and if the British, French, and other Governments had been ready to accept marks in payment of Reparations, then indeed Reparations could have been paid so long as any inhabitant of Germany had a taxable income. But, of course, the Allied Governments were not prepared to take marks ; why should they have been, since marks were of no use to them ? In order to pay Reparations, the German Government had to exchange its marks for pounds, francs, and the other currencies, and the difficulty arose because not enough owners of these other currencies were willing to exchange them for marks. Why they were so unwilling is a point to which we shall shortly recur. But since they were unwilling, there was no way in which the German Government could acquire foreign currencies, and consequently no way in which it could pay Reparations.

A similar misconception has been very prevalent in the United States ever since the end of the war of 1914–18. One is often told in America that it was absurd for the European nations to claim that they could not pay their War Debts, when they managed to afford expensive armies and navies. Here again the difficulty, reduced to its simplest terms, is that the armies and navies were paid for in pounds and francs, while the War Debts had to be paid in dollars. The debtors

found difficulty in exchanging their own pounds, francs, etc., for dollars, because not enough Americans were willing to take those currencies in exchange for their own dollars. In both cases the difficulties were difficulties not of *payment* but of *exchange*.

It is absolutely vital to any understanding of international monetary problems to bear clearly in mind that every international transaction involves an exchange of currencies, and that every exchange of currencies involves the voluntary co-operation of at least two parties. It necessarily follows that every flow of payments from one country to the rest of the world must be exactly balanced by an equal flow of payments into that country from the rest of the world, for every pound *given* in exchange by one set of persons is also a pound *taken* in exchange by another set of persons. This is the first, and virtually the only, Golden Rule of the Foreign Exchanges.

THE FOREIGN EXCHANGE MARKET[1]

The Foreign Exchange Market is primarily the mechanism by which these exchanges of national currencies are carried through. But before we examine its main functions it will be as well briefly to explain the working of bills of exchange, to which we gave a brief glance in Chapter II. Bills of Exchange are not so much a means of making international payments as of rendering international payments unnecessary. We have already seen that before a payment can be made from the United States to the United Kingdom (*e.g.* for a consignment of

[1] This section and the rest of the present chapter describe conditions as they existed before the outbreak of war in September 1939. A description of normal conditions is essential if the main principles of foreign exchange are to be understood, but many, if not most, of the statements made should be taken as subject to modification in wartime. Something is said about the wartime exchange control in the next chapter.

linen sent from Belfast to New York) it is necessary for it to be 'matched' with a payment made from the United Kingdom to the United States. Only then can the demand for dollars be 'married' to the demand for pounds, an exchange be effected, and both payments carried through. The mechanism of the bill of exchange secures the same result though with less complication.

A bill of exchange is closely akin to a cheque. A cheque is an order addressed by a creditor (*i.e.* the depositor) to his debtor (*i.e.* the bank) instructing the debtor to pay a stated sum either to the creditor himself or to another stated person or to whomever the owner of the cheque may order or, in some cases, even to 'bearer.' In the simplest terms, a cheque is an instruction by a creditor to a debtor to pay a sum of money. This description would fit a bill of exchange as well as a cheque. The main differences are threefold : a cheque is addressed to a bank, while a bill of exchange may be addressed to ('drawn on') any debtor; a cheque is payable immediately ('at sight'), while a bill of exchange specifies a date on which it will become payable ; a cheque is usually acceptable in payment of a debt without prior reference to the bank to see if there are funds to meet it, but a bill of exchange is not valid until it has been 'accepted' by the debtor on whom it is drawn. A further, though not essential, difference is that a bill of exchange frequently specifies upon its face the nature of the transaction which it is drawn to finance.

Now let us suppose that our Belfast linen manufacturer, McDermott, had drawn a bill of exchange upon his New York client, Brown, instructing him to pay the sum of £1,000 'ninety days after sight' either to McDermott or to whomever might by that time be in possession of the bill of exchange. The bill would

be sent to Brown who would 'accept' it, by writing his name across it, and return it to McDermott. Now we may suppose that at the same time Jones of Liverpool is anxious to remit £1,000 to Smith of New York in payment for cotton. What could be simpler than that McDermott should sell his bill to Jones, who would forward it to Smith? When the bill fell due for payment Smith would present it to Brown and receive the equivalent of £1,000 in dollars. Each debtor has paid, and each creditor received payment, in his own national currency. Both transactions have been effected without any international exchange being necessary.

This is the simple framework of the bill of exchange system. But there are a number of embroideries, of which two deserve mention. In the first place, a bill of exchange, even when accepted, will not be saleable in the public market unless the solvency and credit standing of the drawee-and-acceptor is known. A bill drawn on Mr. Brown, an obscure linen merchant of New York, may be very difficult to sell. Consequently the practice has grown up of having the accepting done by a firm of international repute and standing. Brown would arrange with the National City Bank of New York to accept his bills for him, and he would request McDermott to draw the bills on the banker rather than on himself. Or he might arrange with a London bank, or with one of the large London 'accepting houses' which make a speciality of this business, to accept bills on his behalf. This, in fact, would be the more usual procedure, since it would save the time necessary to send the bill over to New York and then back again. Bills which are drawn in pounds are usually accepted in London, whether the ultimate debtor is an Englishman or not; and similarly bills which are drawn in dollars are accepted in New York. The bank or accepting

house does not (necessarily, at least) lend any money by accepting the bill ; Brown will be expected to 'put the bank in funds' before the bill falls due. Its essential function is to assure the market that it has investigated the *bona fides* of the debtor and will stand guarantor for him. In a word, it lends its credit ; and the process of arranging to have one's bills accepted by a bank is technically known as 'opening a credit.'

Secondly, when a bill has been accepted by a well-known bank or an accepting house of the first rank, it becomes an attractive security for purchase in the Money Market. Part of the banks' funds, as we saw in Chapter II., have to be invested in securities which will mature very soon and carry the minimum of risk. What could serve better than a bill of exchange? It will mature in three months or less, and, as for security, it carries one of the best-known and most-respected names of the Money Market. There is consequently a demand for the purchase of bills of exchange altogether distinct from the demand for them as a means of making payments abroad. Instead of selling his bill to Jones of Liverpool, who wanted to make a payment to the United States, McDermott might have sold it to the Midland Bank, which wanted to hold it as part of its second line of reserves. By this means the bill of exchange serves a second purpose. When Jones, who wants a bill for the purpose of making a payment to the United States, goes into the market to buy a bill he will want one that is very near to maturity ; otherwise his creditor will have to wait for his money after receiving the bill. But the Midland Bank will want the bill as soon as it is accepted. Consequently, the 'money market' demand for bills (as distinct from the 'foreign transactions' demand) enables McDermott to sell his bill much earlier. In other words, he gets his money

for the linen many weeks before Brown has to pay for it.

But this is really a digression from our main immediate interest, which is in the methods of making international payments. The foreign exchange market was originally the 'foreign-bills-of-exchange market.' It was the place where bills payable in New York, Shanghai, Buenos Aires, and half a hundred other places could be bought. For many decades this was the main method of making payments.

Bills of exchange can still be bought and sold in the foreign exchange market. Indeed, many books on the foreign exchanges still treat them as the main staple of trading, although they do not now assist in settling more than a fraction even of those international transactions which are concerned with the actual import or export of goods, let alone the great body of purely financial dealings. Moreover, there are two elements in the price of a bill of exchange drawn in a foreign currency : first, the value of the foreign currency, and secondly, the discount on the value of the bill until its date of maturity ; and the latter element is a mere source of confusion when we are concerned only with the relative values of different currencies. After this brief mention, therefore, the bill of exchange will receive only incidental recognition in the rest of this chapter. The foreign exchange market now concerns itself with the direct exchange of one currency for another ; 'foreign currency market' would be a more convenient name, were it not for the reminder given by the word 'exchange' that all international transactions are exchanges.

The word 'market' is used in a figurative sense only, for traders in foreign currencies do not, like other traders, meet each other face to face to make their bargains. Indeed, the foreign exchange market is not even confined

within the borders of any one country, since modern methods of communication have made it possible for all the financial centres of the world to be bargaining with each other at once. The foreign exchange dealer transacts his business over the telephone or, where distances are very great, by cable, and a foreign exchange dealer in London will deal with another in Paris or New York as readily, and nearly as often, as with his colleagues in the next street.

The reader should also beware of a second misconception. The average man's acquaintance with foreign currencies is usually limited to the exotic-looking banknotes he uses on his occasional Continental holidays. Foreign currencies in this literal sense can, indeed, be bought and sold in the foreign exchange market, but they form only the tiniest fraction of its business. Just as, in a country like Great Britain or the United States, the great majority of transactions is settled, not by cash, but by cheque, so in the case of exchanging money not for goods but for other kinds of money, much the largest part of the transactions is settled by the transfer of documents akin to cheques. In fact, the business of the foreign exchange market is to exchange bank deposits in one country for bank deposits in another country, and payment is made by cheque. But since a foreign exchange transaction is not an exchange of goods for money, but of money for money, both sides of the transaction are settled by cheque. When, for example, £1,000 is sold for $4,000, the seller of pounds hands over a cheque for £1,000, drawn on his London bank, in exchange for a cheque for $4,000 drawn on a New York bank. Even this is not an accurate reproduction of the majority of transactions. A cheque on a New York bank has to be sent over the Atlantic to be deposited and the money it represents is consequently immobilized for

a week. Most transactions nowadays are 'telegraphic transfers' and instead of giving a cheque, the seller of dollars would send a cable to his New York bank instructing it to make the payment of $4,000 either to the purchaser's account or to whomever he might direct; a code word would take the place of a signature.

In the days when 'foreign exchange' meant 'foreign bills of exchange,' the participants in the foreign exchange market were mainly brokers, or intermediaries, and their function was to put those who had bills to sell in touch with those who wished to buy bills. In a large foreign exchange market like that of London there are still foreign exchange brokers who mediate between buyers and sellers. But the most active participants in the market nowadays are the dealers, who actually buy and sell for their own account. The stock-in-trade of a foreign exchange dealer is a bank balance of sufficient dimensions in each of the main centres of the world. The business consequently involves a considerable amount of capital, and the banks are, in fact, the chief dealers in the foreign exchange market. The banks stand ready to give or take any foreign currency in exchange for their own currency. They will even exchange two foreign currencies; thus, a London bank will exchange dollars for francs or vice versa. But the bulk of their business consists of exchanges of their own currency (pounds in the case of a London bank) for foreign currencies or vice versa. If a London bank buys dollars it will make payment either by crediting the account of the seller or by giving him a cheque drawn on itself. Similarly, when it sells dollars, it will take payment either by debiting the account of the purchaser or by receiving a cheque.

This willingness of the bank to buy or sell foreign exchange is, however, subject to one qualification. No

dealer in commodities of the ordinary sort will, in normal circumstances, lay in stock more rapidly than he is selling it out, or deplete his stock by sales without replenishing it again by purchases. Similarly, the bank will try to keep its stocks of foreign currencies at about their normal level. If those stocks show a tendency to increase, that is, if the bank has been buying more foreign currencies than it has been selling, it will enter the market on its own account and sell foreign currencies until its stocks have returned to their normal proportions. If it has been selling more than it has been buying and its stocks are beginning to run low, it will enter the market as a buyer. The general rule is that the banks try to adjust their stocks of foreign currencies—that is, their balances with foreign banks—at the end of every business day, and sometimes even more frequently. They, therefore, in the main, play the part of dealers pure and simple. When demand for a currency exceeds supply they do not increase the supply out of their own stocks; and when supply exceeds demand they do not attempt to level demand up by buying for their own account. In this way the demand for and the supply of a currency are allowed a great deal of freedom in determining its price.

THE RATE OF EXCHANGE

What is the price of a currency? We may best answer this question by asking another: What is the price of a pound of sugar? The answer to this is obvious: the price of a pound of sugar at any moment is the number of units of currency which are considered *at that moment* to have a value equal to that of a pound of sugar. If sugar is at 4d. per lb., the ratio of value between pennies and pounds of sugar is four pennies =

one pound of sugar. The price of sugar is the ratio at which sugar and pennies are exchanged. It is the ratio, or rate, of exchange.

Precisely similar is the rate of exchange between two currencies. It measures the number of units of one currency which will exchange, in the foreign exchange market, for another. Thus if the rate of exchange between dollars and pounds is \$4=£1, that means that four dollars are considered as having the same value-in-exchange as one pound. There is, however, one complication. Prices of commodities are quoted by naming *the number of units of currency that are given for one* unit of the commodity. Thus, in the newspaper each day, one can read that rubber was so-and-so many pence a pound, tin so-and-so many pounds a ton, coal so-and-so many shillings-and-pence a ton, and so forth. Now in New York, foreign currencies are quoted in exactly the same way. In the same paper, almost on the same page, the New Yorker can read that pounds cost \$4 each, francs cost 2½ cents each, and so forth. But in London, by a strange perversity, most currencies are quoted the other way round. Instead of saying how many pounds-shillings-and-pence have to be given in exchange for one franc or one dollar, the foreign exchange quotations say how many francs or dollars have to be given for one pound. It is as if sugar were quoted not at 4d. per lb. but at 60 lb. for £1. The price—the rate of exchange—is in any case the same, *it is merely the method of quotation that differs.* This topsy-turvy method of quotation makes it a little more difficult to follow the movements of the market. When sugar gets cheaper, the price—the rate of exchange—*falls*. But when the dollar gets cheaper the rate of exchange *rises*. This is easily intelligible with a moment's reflection on the meaning of the word 'cheaper.' When

anything gets cheaper relatively to another, that means that more of it is given in exchange for a fixed quantity of the second thing. When sugar falls from 4d. to 3d. per lb. that means *either* that one pound of sugar can be bought for three pennies instead of four *or* that eighty pounds of sugar will be given in exchange for £1 instead of sixty. Similarly when the dollar falls from $5 to $6, that means *either* that six dollars are given in exchange for £1 instead of five *or* that one dollar costs 3s. 4d. instead of 4s. The different methods of quotation are puzzling, but they do not affect the heart of the matter.

Having defined the rate of exchange between—or relative price of—any two currencies, we can pass on to the very much more difficult and important question: What causes the rate of exchange to be what it is? What causes it to move from time to time? The first point to be made is that fluctuations in the exchange rates are as normal and natural as fluctuations in other prices. There have been times when this statement would not have been true. When, for instance, two currencies consist largely or entirely of actual gold coins there can be little fluctuation in their value in terms of each other, for the difference between them is only that one unit is a greater weight of gold than another. In such circumstances, the exchange rate is equivalent to the ratio of value between one ounce of gold and twenty-five ounces of gold. This is a fair description of the relations between the pound and the franc for several decades before the last war. But since 1914 there has not been a single pair of currencies in the world both of which have consisted entirely, or even mainly, of gold coins. Where each of two currencies, while consisting of paper banknotes, is based on and convertible into gold, fluctuation in the exchange rate between them is also severely limited, so long as the banknotes can be

freely converted into gold. But, as will be argued in the next chapter, the indefinite maintenance of gold convertibility is not a matter which can safely be left to the simple operation of natural forces, but needs the *active and conscious intervention of the monetary* authorities. The stability of the exchanges which it induces is, therefore, not natural but man-made and man-maintained. We need not, however, for our present purposes, argue the vexed question whether stability or fluctuation of the exchanges is more normal or more desirable; it is sufficient to point to the *historical fact that periods of stability have been the* rare exception rather than the constant rule. Nevertheless, the majority of those interested in monetary affairs formed their ideas on the subject during the longest of the rare exceptional periods when stability of the exchanges, except in the case of a number of monetary pariahs, was the general rule, and there is *consequently a tendency to regard instability as an* unnatural and alarming state of affairs. Those who, for the greater part of their lives, have lived at the side of a lake created by an artificial dam, would regard the removal of the dam and the appearance of a swift river in the place of a placid lake as highly abnormal and even alarming. But in the eyes of nature, as of history, *their normality would be abnormal and their natural* state one of artificial restraint. We shall later discuss the pros and cons of exchange stability; it is here important to make it clear that in the modern world, where currencies are no longer composed of gold coins, stability of their values in terms of each other can only be attained as the result of measures deliberately taken to that end.

The price of a currency is determined, just as the price of anything else, by the relative strength of the

demand for and the supply of that currency in the foreign exchange market. The exact meaning of these terms may be a little hard to grasp. People in the United Kingdom may want to make remittances to the United States for any one of hundreds of reasons. They may want to pay for goods bought, or for services rendered. They may have a debt to pay in America, or interest on it. They may wish to buy American securities ; or Americans who have owned British securities, having sold them, may wish to remit the proceeds home. English people may wish to send presents of money to their American relatives, to acquire dollars for the purpose of travelling in the United States or on American ships, or to pay royalties on American films. Any one who, having pounds, wishes to exchange them into dollars, for whatever reason, is 'demanding' dollars in exchange for pounds. Any one who, having dollars, wishes to exchange them into pounds, for whatever reason, is 'offering' or 'supplying' dollars in exchange for pounds. The 'demand' for dollars is, of course, the 'supply' of pounds, and the 'supply' of dollars is the 'demand' for pounds. When we talk about the relative strength of the demand for, and supply of, dollars in exchange for pounds, we mean the relation of the number of pounds that are being 'offered' for exchange into dollars to the number of pounds that are being 'demanded' in exchange for dollars.

The reasons which may underlie a demand for or an offer of a currency are so many and so variable, and the origins of 'demand' are so independent of the origins of 'supply,' that it would seem, on the face of it, to be a mere coincidence if the number of dollars which are offered for sale on any one day were exactly equal to the number of dollars which were wanted for purchase. In fact, it is highly probable that the 'demand' and

'supply' sides of the market will not be equal. Nevertheless it is axiomatic that at the end of every day the number of dollars bought must equal the number of dollars sold, since every sale of dollars is also a purchase of dollars by some one else. But if demand and supply were originally unequal, this eventual equality of bargains accomplished can only be brought about by a change of price, that is, by a movement of the exchange rate. Let us suppose that at the close of business on Monday night the dollar-pound exchange rate was \$4.50=£1. Now on Tuesday morning more people wish to buy dollars for pounds than wish to buy pounds for dollars at that rate. Since the demand for dollars in exchange for pounds exceeds the supply, the price of dollars in terms of pounds will increase and the exchange rate will move to, say, \$4.40=£1. Now some possessors of dollars who were unwilling to give \$4.50 for £1 will be willing to buy pounds at the cheaper price of \$4.40 each. Similarly, some possessors of pounds who were willing to exchange them for dollars if they could get \$4.50 for each pound, will be unwilling to do so if they can only get \$4.40 for a pound. In other words, the supply of dollars to be exchanged into pounds will be increased and the demand for dollars in exchange for pounds will be diminished. By a process of trial and error the exchange rate will eventually settle down at the figure which will make the demand for and supply of dollars equal. So long as there are more persons anxious to buy dollars on that day than to sell, the price of the dollar will rise, that is, the exchange rate will 'move in favour of the dollar.' So long as sellers exceed buyers, the price will fall and the exchange rate will 'move in favour of the pound sterling.'

But two currencies cannot be considered in this way in isolation. At all times when business is being trans-

acted both in London and in New York, the exchange rate between the dollar and the pound must be virtually the same in both centres. If the rate were \$4.50 in London and \$4.40 in New York, any one would be able to exchange \$440 for £100 in the New York market and then re-exchange the £100 into \$450 in the London market, making a profit of \$10 in ten minutes. The rush to do this would increase the demand for pounds in New York and for dollars in London. The exchange rate would rise in New York and fall in London until the divergence was wiped out. This sort of transaction is given the name of arbitrage, and as there is a large body of skilled arbitrageurs in every centre, keenly on the look-out for the small profits that can be made from temporary divergences, the divergences never last for more than a few minutes.

But arbitrage need not confine itself to two currencies. Let us suppose that the exchange rate between dollar and pound is \$5=£1, both in London and New York, the exchange rate between pound and franc is 100 frs.=£1, both in London and Paris, while the exchange rate between franc and dollar is 5 cents=1 fr., both in Paris and in New York. These rates are all in equilibrium, there are no divergences out of which an arbitrageur can make a profit. Now let us suppose that there is suddenly a large payment to be made from London to New York, which increases the supply of pounds relatively to dollars, but does nothing to affect the flow of payments between London and Paris, or between Paris and New York. The increased demand for dollars in London will force the exchange rate down to, say, \$4.95 and arbitrage transactions will see that the movement is the same both in London and in New York. But if neither of the rates in which Paris is concerned has moved, there will be a profit on three-

cornered arbitrage. A sum of £100 in London will still buy 10,000 frs. and 10,000 frs. will still buy $500. But $500, at the new London-New York rate, is now worth slightly over £101. It is therefore profitable to send money chasing round the circle and the arbitrageurs will promptly do so. The supply of pounds relatively to francs will increase, while the demand for dollars in exchange for francs will also increase. The London-Paris rate will fall to, say, 99½ frs.=£1, while the Paris-New York rate will fall to, say, 4.965 cents=1 fr. In other words, the dollar will have risen both in London and in Paris, but more in London than in Paris, while the pound will have fallen more in New York than in Paris, and the franc will have fallen in New York and risen in London. In this way, *changes in the conditions of demand and supply between any pair of currencies are communicated to the remainder.* If the increased demand in London had been for dollars and francs equally, the pound would have fallen equally relatively to both franc and dollar while the franc-dollar 'cross-rate' would not have been affected. We cannot thus accurately speak of the demand for or supply of a currency in exchange for any one other currency. We must think of the demand for or supply of a currency in exchange for all other currencies together.

The fluidity of the foreign exchange market and the incomparable ease with which transactions can be completed in a trice over thousands of miles make it almost impossible to disentangle the causes which are operating at any moment. The root cause of a minute fluctuation in the exchange rates may be the decision of an American magnate to remit $10,000,000 to London to purchase an English business. This is a demand for pounds in exchange for dollars, and even though there has been no change in the mutual relationships of any

other pair of currencies, the transaction may leave New York in the shape of a demand for lire, pesos, or pesetas in exchange for dollars, and it may arrive in London in the shape of a demand for pounds in exchange for francs, guilders, or Swedish crowns. All we know is that, as the net result of many movements, the pound is a little higher all round and the dollar a little lower, that the improvement of the pound has been just enough to persuade the holders of, say, about £2,000,000 (assuming the rate of exchange to be in the neighbourhood of $5=£1) to part with it in exchange for a variety of foreign currencies, while the decline in the dollar has been just sufficient to persuade owners of another variety of foreign currencies to exchange them for $10,000,000.

We have now given a formal answer to the question: What determines the rate of exchange? But it is not a wholly satisfying answer to say that a variety of inscrutable decisions, working themselves out in ways which cannot be traced, cause the balance of Demand and Supply to alter and the exchange rates to move. For the small day-to-day movements of the exchanges, this answer must nevertheless suffice. Skilled observers can *guess* what it is that has made the dollar rise a point or the lira weaken a shade; nobody can *know*. But if we take a view over a longer period we can make some observations about the fundamental factors that lie behind the momentary Demand and Supply and sketch out some of the principles which ultimately determine the relative values of different currencies.

THE VALUE OF CURRENCIES

The reasons which may impel people to exchange currencies are, as we have seen, manifold. But it is possible to classify them into three great categories.

The first and most obvious category of international remittances is in respect of ordinary trade. 'Trade' in this sense does not mean merely the purchase and sale of goods that can be seen and handled. It includes also the purchase and sale of services—the sale of steamer freight, of services to tourists, of insurance, of the right to use patents, and other services of the sort. In fact 'trade' includes both 'visible' and 'invisible' trade.

The second great category relates to movements of capital and interest on capital. Englishmen in the past have invested vast sums of money in foreign countries,[1] by the direct purchase of properties, by the purchase of shares in foreign companies, and by making loans to foreign countries and industrial companies. Whenever interest or dividends are paid on these investments or the original loans are repaid, a payment is made by foreign countries to Great Britain and the demand for pounds is increased. Similarly, whenever a foreigner wishes to make an investment in Great Britain, either by buying a house or factory or by purchasing British securities on the London Stock Exchange, he must first exchange his own money into pounds. One form of international investment warrants special mention. It was explained in Chapter II. that bankers are constantly faced with the problem of investing their funds in ways which combine profitability and liquidity in the desired proportions. Part of their funds they customarily lend to the money market, either by direct loans to discount brokers and stockbrokers or by purchasing bills of exchange and Treasury Bills. Now if, as frequently happens, a higher rate of interest with the same degree of liquidity can be earned in New York than in London,

[1] 'Foreign countries' can be defined for our present purposes as all countries having currency systems separate from that of Great Britain, and the term therefore includes all the self-governing Dominions, and most parts of the British Empire.

a certain part of the funds of the British banks will be moved to New York. When the rate of interest in New York falls below that in London, these funds will be moved back to London, and will be followed by part of the funds of the American banks. This will only be true, however, if the banks can make sure of getting their money back at the same exchange rate as that prevailing when they lend it, for otherwise they would run the risk of losing more through a movement of the exchange rate than they gained in interest. This is a point to which we shall recur later in the chapter. In times of trade depression, when safe investments are scarce, or when the future value of individual currencies is doubtful, many private individuals will prefer to keep their capital on deposit in the currency which seems for the moment to be the safest. As such money is in search of security rather than a high rate of interest it will quickly flee from one currency to another. In recent years the amount of this 'international short-term capital,' or 'hot money,' has grown very large and its movements between the various financial centres has become increasingly rapid.

The third category is that of speculative transactions. People may wish to acquire dollars for no reason other than their belief that the dollar is about to rise in value relative to other currencies ; owners of pounds may be anxious to exchange them for other currencies because they fear that the pound is going to fall in value. Nearly every foreign exchange transaction can be fitted into one of these three categories—either it is payment for goods received or services rendered ; or else it is a movement of capital for investment or security, or of interest on capital previously invested ; or else it is a speculative transaction designed to make a profit, or avoid a loss, out of the movements of the rates of

exchange themselves.[1] We may name these three categories 'trade,' 'capital,' and 'speculation.'

Of these three categories the two latter differ in one important particular from 'trade' transactions. When pounds are exchanged into dollars for an investment of capital, interest must be paid on that capital and the capital sum itself must one day be repaid. In other words, the payment *out of* Great Britain sets up a series of reverse payments *into* Great Britain. Over a period of twenty years, for every £1,000 invested abroad by British citizens, about £1,000 is sent back to them in interest. Over the twenty years as a whole, therefore, the Supply of pounds and the Demand for them have been increased equally. Capital payments, then, are 'self-reversing': they always lead to payments being made in the opposite direction. Their effect on the value of a currency can be temporary, but not permanent. Indeed, many capital movements reverse themselves very quickly. For a large proportion of international capital payments represent not the investment of individual savings in business enterprises or in securities, but the temporary deposit of banking funds in the money markets of the different centres. These so-called 'short-term funds' retrace their steps within a few months of their arrival. When, for example, funds of this nature are deposited in London, their arrival increases the Demand for pounds. But their departure a few months later correspondingly increases the Supply of

[1] The only exceptions are payments made without any return or any prospect of profit. The chief examples of this are gifts made by the citizens of one country to those of other countries and indemnities exacted by victors from the vanquished. Both have been important for particular countries at particular times (*e.g.* gifts for the United States in the period 1922–29 and Reparations for Germany in the same period), but they are of comparatively small quantitative importance for the bulk of countries. In what follows, they are ignored.

pounds. Their effect on the value of the pound sterling may be quite violent ; but it is necessarily temporary.

Speculative transactions are similarly self-reversing. When a speculator buys a currency with the hope of making a profit out of a rise in its value relative to other currencies, he cannot make his profit until he sells the currency. Similarly, when he sells a currency in order to make a profit out of a fall in its value, he cannot make his profit until he buys the currency back again. The principle of double transactions is inherent in the nature of speculation.

Our first category, that of trade, is the only one of the three which is not self-reversing. When the Liverpool cotton broker buys dollars to pay for raw cotton he has bought, there is nothing in the transaction which will lead to a reverse transaction at a later date. It is finished, and whatever influence that exchange of pounds for dollars may have had on the exchange rates is permanent, in the sense that it will not give rise to an opposite effect at a later date. Now this distinction between the categories gives us a most important clue in our search for the principles that determine the relative values of different currencies. So far as day-to-day fluctuations in the rates of exchange are concerned we have to take account of every variety of payment passing. But since 'capital' and 'speculative' payments sooner or later reverse themselves, we can ignore them when we are considering the permanent or 'long-run' causes of a currency's value and confine ourselves to 'trade' payments alone. If we can discover what determines the size of the payments which a country makes for goods and services bought relative to the size of the payments it receives for goods and services sold, we shall have discovered the origins of the value of that currency relative to others.

One obvious influence on the size of a country's purchases and sales of foreign goods and services is provided by tariffs and customs duties. But this influence is not so important or lasting as might appear. When one country, by imposing tariff duties, restricts its imports, the immediate effect is to diminish the supply of its currency coming on to the foreign exchange market and thus to enhance its value. But such action is more often than not followed by similar measures on the part of other countries to restrict *their* imports, which have the effect of reducing the volume of the first country's exports and thus nullifying the original action, so far as the exchange rates are concerned. Nevertheless, this is not a hard and fast rule, and whenever a country is able by tariffs to restrict its imports to a greater degree than its exports are restricted by other countries' tariffs, the net effect will be permanently to raise the exchange value of its currency above what it would otherwise be. A good example of this is provided by the United States, which has been particularly successful in restricting its imports without penalizing its own exports, partly because a number of the goods it exports are so necessary to other countries that they have been reluctant, or unable, to restrict them by means of customs duties. The converse is also true. When a country is unwilling or unable to restrict its imports to as great a degree as its exports are limited by other countries' tariffs, the effect will be to diminish the demand for its currency relative to the supply and depress its value below what it would otherwise be. Great Britain, until the imposition of the general tariff in 1932, is a case in point.[1]

[1] It may be remarked in passing that this is only a small part of the case for and against protective tariffs. The main body of that argument is not relevant to this book. No economist, however, would deny that the

Apart from tariffs, the influences which determine the volume of a country's trade are many and various, and to examine them all would take us very far into the theory of international trade, which is beyond the scope of this book. But we are not here concerned with the causes that determine the size of a country's imports *and* exports. We are interested only to know what causes the value of imports to alter *relative to* the value of exports.

Now, it is obvious that one of the very largest of these influences is *price.* People only buy foreign goods when they can get a better article for the same price, or the same article cheaper, than by buying at home. And if foreign goods get cheaper, more of them will be bought. If the general level of prices in Great Britain falls, more British goods will be exported, while fewer foreign goods will be imported into Great Britain, since they will have more difficulty in competing with the home-made goods which have fallen in price. Thus the demand for foreign currencies in payment of imports will decline, while the demand for pounds in payment for British exports increases ; the demand for pounds will increase relatively to the supply and the pound will rise in value in relation to other currencies. This series of events applies to a fall of prices in Great Britain only *relatively to* prices in other countries. If foreign prices fall as rapidly as British prices, there is clearly no reason why British exports should increase or British imports decline. Conversely, if British prices remain steady while foreign prices rise, the effects will be the same as those of a fall of British prices. The effects of a relative *rise* of British prices are,

effect of the imposition of tariff duties, except in so far as they are offset by other nations' tariffs, is to raise the exchange value of the currency *above what it would otherwise be* (the italicized words are important, as will shortly appear). But a high exchange value of the currency is not necessarily to be desired.

of course, the opposite of those of a relative fall : British imports increase and British exports fall off.

This connection between prices and exchange rates is really a very simple matter. The value of money is measured inversely by prices. When prices are high the value, or purchasing power, of money is low and vice versa. Value measured by prices we may call the *internal value* of a currency, while the *external value* of a currency can be taken as measured by the ratio at which it exchanges for other currencies. All, then, that we have been saying is that movements of the *external* value of a currency tend to follow movements of its *internal* value. More accurately, movements in the external value of a currency tend to follow movements in its internal value *relative to the internal value of other currencies.* Or put in still another way, the ratio of exchange between two currencies tends to be the same as the ratio between their respective purchasing powers. This whole theory has accordingly been given the name of the Purchasing Power Parity Theory.

In the years during and immediately after the war of 1914–18 this principle was very fully developed by the Swedish economist, Professor Gustav Cassel. According to him the exchange rate would tend to fall in exactly the same proportion as the price-level rose. Thus, if prices in Great Britain doubled while there was no change in the outside world, the new equilibrium value of the pound would be just half what it previously was. Professor Cassel went further than this ; he said that movements in the price-level *caused* movements in the exchange rate, while he implied that movements in the exchange rate were powerless to produce any permanent effect upon the price-level. The importance of Professor Cassel's theories lies in their effects upon public policy at the time. In those years nearly every government of

Central Europe had an unbalanced budget, a rapidly expanding volume of paper money, continually rising prices and a currency whose value in exchange for other currencies was continually declining. Faced with these conditions, the governments declared that the fall of their currencies was due to the need to pay reparations, or the actions of 'international speculators,' or a hundred and one other reasons; that the fall of the currencies caused the rise of prices which, by continually increasing the governments' expenditure without increasing their revenue, made it impossible to balance their budgets and compelled recourse to the printing press in order to create the money necessary to fill the gap between income and outgo. Consequently, they argued, it was futile to attempt to balance the budget and stop the printing presses until the fall of the exchange value of the currency had been arrested. In other words, they were not to blame. Now, if Professor Cassel was right, this line of argument was quite wrong and a balanced budget was the first, rather than the last, step in monetary reconstruction, since it would stop the creation of money which was making prices rise.

Professor Cassel's views were generally accepted by the experts at the time, and events gave him a great deal of justification, for it was not until the governments and peoples were ready to make the sacrifices necessary for balancing their budgets that the collapse of currencies could be arrested. But regarded as a theory, the purchasing power parity theory is subject to important qualifications.

We have already observed that it is subject to modification by tariff policy. For if a country is in the favourable position of, say, the United States, it can maintain a higher exchange value for its currency than would otherwise be the case. This may mean one of two

things. When a country succeeds in putting on a tariff which is not offset by other countries' tariffs, the exchange value of its currency may rise without any change in its internal price-level. The same result would be produced if the exchange value remained what it was previously and the price-level rose. In either case the external value of the currency will be greater than its purchasing power or internal value. This is why for many decades dollars were able to buy more when exchanged into pounds and spent in England than when spent in the United States.

In the second place, we must define what we mean by 'the price-level.' For obviously all prices do not enter into the calculations of those who carry on foreign trade. Houses, for instance, may be much cheaper in France than in Great Britain ; but no difference in the price will induce people to import houses from France. It is not right, however, to go to the other extreme and assume that the exchange rate is influenced only by the prices of things which actually *do* move in international trade ; we must take some account of the articles which *might* move. Thus, coal is not at present exported either by Great Britain to the United States, or by the United States to Great Britain. But if the price of coal in Great Britain were sufficiently below the price of coal in the United States to make it profitable to send it across the Atlantic, the trade would be started and the volume of pounds and dollars coming on to the foreign exchange market would be affected. This is an extreme example, as the cost of transporting the coal would be so disproportionately heavy ; but between every pair of countries there is a number of commodities which are not traded, but which easily could be with a small alteration of relative prices. When we talk of the rate of exchange depending upon the relative height of

'the price-level,' we must interpret 'the price-level' to *include the prices of all things which are, or which might be, traded.*

This point brings up a practical difficulty of calculating purchasing power parities. As we saw in Chapter III., we cannot accurately measure the alterations of the general price-level, we can only make approximations by means of index numbers; and the composition of the index number will determine exactly what portion of the general price-level is reflected. Now the best known index numbers are those of wholesale prices, which measure changes in the market prices of a comparatively small number of raw materials and primary products. If we calculate purchasing power parities by means of these index numbers we shall be ignoring not only all forms of manufactured goods and products, but also the whole range of services and other 'invisible exports.' Furthermore, most of these raw materials are traded in public markets in the different countries which are in close touch with each other. Thus, if the pound declines in value relatively to the dollar, either the price of wheat in Liverpool must rise, or the price of wheat in Chicago must fall, or else it would be profitable to buy wheat in Liverpool and sell it in Chicago. If, therefore, we calculated the purchasing power parity on the price of wheat alone and put it forward as the cause of the movement of the exchange rate, we should be confusing cause and effect. On the other hand, if we run to the other extreme and use 'cost of living' index numbers, we shall be including all manner of things, such as rent, which have no influence on international trade. Furthermore, the retail prices of goods in a country may be no guide to the prices at which the same goods are sold wholesale to foreigners. From this dilemma there is no escape. In many ways the best

solution is to use an index number of wage rates, for wages enter into every form of service and commodity, manufactured or not. Unless wages are lower in the export trades than in the rest of industry (as was true of Great Britain in the decade following the Great War), movements of the index number of wages will be as close a guide as can be obtained to the movements of the price-level of those goods and services which move, or which might move, in international trade. But even here we must make allowance for changes in the relative efficiency of labour in different countries.[1]

A further objection can be brought against the purchasing power parity theory as propounded by Professor Cassel. An integral part of his theory was that movements in price levels could bring about changes in exchange rates, but that changes in exchange rates exercised no influence over price-levels. Now, clearly this latter part of the theory is not always true. Let us suppose, for instance, that heavy capital movements of a speculative nature depress the value of the pound and keep it depressed for a period of several months. The

[1] Assuming this difficulty can be overcome and perfect index numbers can be selected, the 'purchasing power parity' is calculated in the following manner. Let us suppose that it is the purchasing power parity between the pound and the dollar that is required. First of all, some time in the past is selected when it is assumed that the actual exchange rates corresponded to a position of equilibrium (*e.g.* for post-war calculations, the year 1913 is frequently taken as 'base-year'). Let us suppose that in the 'base-year' the American index number stood at 120, the British at 100, while the rate of exchange was \$5.00=£1. The index numbers now stand at, say, 180 in America and 200 in Great Britain. Then the 'purchasing power parity' between the two currencies is

$$\$5.00 \times \frac{100}{200} \times \frac{180}{120}, \text{ or } \$3.75 = £1.$$

If the actual rate of exchange is \$3.75, then the relationship between the averages of the two sets of prices contained in the index numbers will be the same as in the base-year. And if the base-year position represented an equilibrium, so, according to the theory, does the new relationship.

immediate effect will be to make all imported goods in Great Britain dearer (for more will have to be given to pay for American wheat or French lace). Many British industries depend upon imported raw materials and may consequently be forced to raise their prices. Moreover, British exports will have suddenly become cheaper in foreign currencies and more of them will be sold. British exporters will therefore be tempted to raise their prices, for if they raise them by less than the pound has fallen they will increase their profits, while their goods will still be cheaper in foreign currencies than they were and will enjoy a larger share of the foreign market. Thus the British price-level will be raised by the fall of the pound. At the same time, the increased competitive power of the British export industries may force other countries to lower their prices in order not to lose their trade. Thus the fall of the pound will tend not only to raise British prices but also to lower foreign prices. In general outline this is what happened after the fall of the pound in September 1931.

The effect upon the price-level of fluctuations in the rate of exchange is likely to be different in different countries. In a country which imports a large proportion of the goods it consumes and devotes a large proportion of its resources to producing goods for export, the effect is likely to be large. For changes in the rate of exchange are bound to affect the prices of imports and of exported goods, and where these two categories are a large part of all goods the fluctuation of the general price-level will be *pro tanto* larger. Thus a given movement of the exchange rate could be expected to have a larger effect in, say, Holland than in, say, Russia. But once again we must beware of confusing *relative* movements with *absolute* movements. A fall in the exchange value of a country's currency will tend to initiate a *relative* increase

in that country's price-level. The relative increase may come about by a rise in that country's price-level, other countries' price-levels remaining steady. But if the country whose currency has fallen is a large and important purchaser of goods, it may form such a large part of the world market that the fall in its currency will bring about a fall of prices in other countries rather than a rise in its own prices. This is what happened after the pound depreciated in September 1931. The British market is the largest single element in the world demand for a great many commodities. When the pound falls and the inhabitants of Great Britain offer less (in foreign currencies) for these goods, their price in foreign currencies falls. Thus, after 1931, although the pound sterling lost 40 per cent. of its exchange value the *relative* rise in British prices was brought about by a fall in prices throughout most of the rest of the world, while British prices were as nearly as possible stable.

But though the extent of the effect of exchange movements upon prices differs from country to country, there is always *some* effect. We must therefore beware of saying that movements in the price-level are the exclusive cause of movements of exchange rates. All that we can say is that there is a basic connection between the two. And when we attempt to define that connection by the purchasing power parity theory, we are faced with the formidable list of qualifications which we have drawn up. The purchasing power parity theory is subject to the effects of tariff policy. Any attempt to calculate 'purchasing power parities' is hindered by the difficulty of knowing which prices to take into account and of finding an index number to represent them. Moreover, even if the calculation were possible, the result would be subject to modification for years and decades at a time by capital movements.

In view of all these qualifications it is probably more prudent to avoid the term 'purchasing power parity.' The reader might indeed conclude that it would be as well to forget all about the theory. But this would be going too far. At any one time we know that there is an 'equilibrium rate of exchange' between two countries—the 'equilibrium rate' being defined as the rate at which the Demand for each currency would be equal to the Supply of it, ignoring speculative and abnormal [1] capital movements. We cannot exactly calculate this equilibrium rate, but a comparison of the movements of prices enables us to make a rough approximation.

Moreover, in spite of its deficiencies, the recognition that there is a close connection between prices and exchange rates has a certain practical importance from the point of view of currency policy, for it warns countries that there are certain things they cannot do.

For example, in 1925, Great Britain, by returning to the gold standard, fixed the value of the pound at a level which was too high relatively to the level of prices, costs and wages which then prevailed. The purchasing power parity theory made it clear that that level of the pound sterling could only be maintained if prices and costs were lowered relatively to the prices and costs of the rest of the world. If such a reduction were not carried out, the exchange rate of the pound would have to fall. For six years the British authorities kept the

[1] In thinking about the equilibrium rate of exchange over a long period of years, we should, of course, ignore *all* capital movements. But for shorter periods we can assume that a certain movement of capital (or of interest on capital) is 'normal' (see Chapter X.) and allow for it in our calculations. Moreover, the phrase 'equilibrium rate of exchange over a long period of years' begs a very large question, for there will only be such a thing if the economic relationships of the countries in question remain stable over that period of time. They are unlikely to do so, unless steps are deliberately taken to make them do so. As we shall see in Chapter IX., this is the vital part of the gold standard mechanism.

pound up by the temporary device of raising the level of interest rates and thus attracting foreign capital. We saw in the last chapter that a policy of high interest rates, by diminishing investment, will exercise a depressing effect upon prices and, by causing unemployment, on wage rates. But owing to the peculiar circumstances of Great Britain, although abnormally high unemployment prevailed throughout these years, wage rates were not reduced and consequently prices could not be lowered. The disequilibrium between the price-level and the exchange rate consequently persisted, and since the mountain of prices would not come to the Mahomet of the exchange rate, Mahomet had to go to the mountain. If costs and prices could not be lowered it was inevitable that sooner or later the exchange value of the pound should fall. The inevitable happened in 1931, when the foreign capital which had been attracted to London by the high interest rates suddenly took fright and fled, and in its flight dragged sterling off the gold standard.

The converse is equally true. Just as the artificial maintenance of the pound at too *high* a level imposed a handicap on British exports and exerted a depressing influence on British prices, governments have occasionally tried to maintain their currencies at too *low* a level, in the hope of assisting their export trades. For a time this manœuvre may succeed, but we shall see in the next chapter that it has narrow limits ; in the course of time *either* the level of prices, wages, and costs must be allowed to rise and wipe out the differential advantage of the exporters *or else* the exchange value of the currency must be allowed to rise to its equilibrium rate. In the long run economic principles will reassert themselves and the exchange rate will inevitably tend to be neither more nor less than the 'equilibrium rate,' which would

express a balanced relationship between the whole economic structures of the different nations.[1]

'In the long run'—but the run may in certain cases be very long. If a country can rely upon borrowing every year from foreign countries it can keep the value of its currency above its purchasing power parity for many years. The best-documented case on record is that of Canada in the years between 1900 and the Great War. In these years, Canada borrowed from abroad at least $30 millions a year, and sometimes ten times as much. As a result the exchange rate of the Canadian dollar could be maintained above its purchasing power parity. As the Canadian dollar was on the gold standard and could not rise, the purchasing power fell, *i.e.* Canadian prices rose.[2] But this case is exceptional; there are few countries where the prospects of investment are so favourable and which are in such close touch with a large foreign capital market that they can rely on raising capital abroad every year, in bad times as well as good. For the great majority of countries the 'long run' is no more than six or eight years or so.

[1] That is, if any freedom is left to the foreign exchange market. A position of disequilibrium may be preserved by the brute force of exchange restrictions, which are described in the next chapter.

[2] That the level of Canadian prices was being maintained artificially high by the stream of foreign borrowings is demonstrated by the fact that the prices of imported goods in Canada were relatively low, those of exported goods relatively high. That is to say, Canada was getting her imports more cheaply and getting more money for her exports than she would have done if the exchange rate had not been artificially maintained. The reader is referred to *Canada's Balance of International Indebtedness, 1900–1913*, by Professor Jacob Viner (Harvard University Press, 1924), for a clear account of a most interesting 'laboratory experiment' in the principles of foreign exchange.

FORWARD EXCHANGE

The foregoing discussion is as close as we can get to the fundamental principles which determine the ratios at which bank deposits in different countries are exchanged for each other in the foreign exchange market. Before leaving that market, however, there is another of its functions which is worth a passing glance.

We have been assuming that the rates of exchange between the different currencies are free to fluctuate in accordance with changes in demand and supply. We have, indeed, argued that this is the normal and natural state of affairs.

In the next two chapters we shall have to discuss the various devices for keeping exchange rates from fluctuating. But even without limiting the fluctuations of the exchanges, the foreign exchange market provides an interesting and ingenious way of avoiding the unexpected losses arising out of them. It does this by means of the market in 'forward exchange.'

The dealers of the foreign exchange market are primarily concerned with the purchase and sale of foreign currency—bank deposits at foreign centres—for immediate settlement. Such exchanges are made 'on the spot' and concluded either on the day of the bargain or at the latest on the day following. They are, accordingly, called dealings in 'spot exchange.' It is with such transactions that we have hitherto been exclusively concerned. But the dealers are also prepared to buy or sell 'forward exchange,' that is, they are willing to contract to buy or to sell a given amount of foreign exchange in one month's, two months', or three months' time at to-day's 'spot' rate of exchange, whatever the 'spot' rate may by that time have become.

Not exactly at to-day's rate, for the 'forward rate' will diverge from the 'spot rate' by a small amount. Thus if to-day's spot rate between London and New York is \$5.00=£1, the one month's forward rate may be \$5.02=£1 or perhaps \$4.98=£1, the two months forward rate \$5.04 or \$4.96, and the three months' rate \$5.06 or \$4.94. These rates would normally be quoted as so many cents premium or discount on the spot rate. Thus a rate of \$5.06 for three months' forward dollars when the spot rate was \$5.00 would usually be expressed by saying that three months' forward dollars stood at six cents discount.[1] These rates are not quoted as frequently as those of the spot rates, but they will be found every day, for some half-dozen of the more important currencies, in the financial press.

Now this facility is obviously of great advantage to the trader. To revert to our example, Mr. Brown of New York can safely make his contract in terms of pounds if he knows now at what rate he will be able to buy pounds for dollars in three months' time. If on 1st January the contract is concluded to sell 10,000 yards of linen at 1s. a yard, the spot rate being \$5.00=£1 Mr. Brown will be able to 'buy £500 three months forward' from his bank (*i.e.* the bank will undertake to give him £500 in exchange for dollars on 1st April) at the rate of, say, \$5.05 (if forward dollars are at a discount) or at \$4.95 (if forward dollars are at a premium). In either case he knows exactly how much in dollars he will have to pay on 1st April; \$2,525 in the one case and \$2,475 in the other. Similarly an English trader who has a payment to make in dollars in three months

[1] The reader should not be misled by the fact that the higher figure represents a discount, for the figure quoted is the price not of dollars but of pounds, and a rate of \$5.06 implies that more dollars have to be given for one pound; forward pounds stand at a premium, forward dollars at a discount.

time is able by 'buying three months' forward dollars' to make certain now exactly how much, in pounds, the payment will cost him. Neither merchant need concern himself with the fluctuations of the spot rate once the bargain is concluded.

But if the device of the forward exchanges removes the burden of exchange losses (and the possibility of exchange profits) from the merchants and others who avail themselves of the forward exchange, those losses and profits are only transferred and not destroyed. How is it that the banks are able to offer these facilities, and how do they fix the premium or discount of the forward rates?

In part the banks can offset the opposite transactions of their different customers. Thus, if the bank is requested by Smith to buy \$100,000 three months' forward and by Jones to sell \$100,000 three months' forward, the two transactions can be offset—in the picturesque phraseology of the market, they can be married—and, whatever happens to the spot rate, in three months' time the profit on the one transaction will equal the loss on the other.[1] But it will be pure accident if the forward purchases and forward sales of any currency by the public exactly equal one another. There is bound at any time to be an excess of one or the other. But it is no part of the business of a bank to take the risk of exchange fluctuations. If at to-day's rate it has sold more forward dollars than it has bought, a rise in the exchange value of the dollar will involve it in loss. Similarly, a fall in the dollar will cause loss if it has bought a net amount of forward dollars. Consequently the bank will take steps to 'cover its position.' If it has contracted to sell, on balance, say,

[1] The bank would, of course, quote slightly different rates to the two customers, say, \$5.05¼ to Smith and \$5.05⅜ to Jones, so as to have in *any case enough profit to cover its expenses.*

1,000,000 three months' forward dollars, it will buy $1,000,000 immediately in the 'spot' market and keep that sum of dollars on deposit in New York until the contract matures. But to keep this sum on deposit in New York may involve a loss of interest as compared with employing the equivalent sum in London. If so, the bank will make a charge for selling forward dollars—that is, forward dollars will stand at a premium. But if interest rates in New York are higher than in London, the extra interest thus earned will enable the bank to sell forward dollars more cheaply than spot dollars—that is, forward dollars will be at a discount.

Thus the divergence between spot and forward rates depends upon the relative level of interest rates in the two countries. The general rule is that the currency of the country with the higher interest rates will stand at a discount in the forward market as compared with the spot market. The price of 'forward' exchange is, indeed, as simple a matter of demand and supply as the price of 'spot' exchange. If interest rates are higher in New York than in London, every one with liquid funds at his disposal will wish to deposit them in New York. Consequently there will be a demand for 'spot' dollars in terms of sterling and the 'spot' rate will move in favour of the dollar. But as every one will also be attempting to protect himself against the risk of a depreciation of the dollar by selling forward dollars, there will be an excessive supply of them, and forward dollars will go to a discount.

If the forward exchange market were used only to 'cover' the risk on genuine trade or financial transactions—and if the risk of all such transactions were 'covered' in the forward exchange market—the premium or discount on forward exchanges would probably never exceed those amounts which are justified by the differ-

ences in interest rates between the separate money markets. But in fact the forward exchanges are usually the prey of the speculators. To sell a currency forward is the easiest possible way of speculating on a fall in its value, as the speculator has to put no money down until his contract matures—he is, in fact, merely making a bet. Conversely, a currency which is expected to rise in value will be bought forward. This leads to a one-sidedness of demand or supply, which would otherwise be tolerably equal. Moreover, even those who have genuine contracts to 'hedge' may refrain from doing so if they have reason to expect a movement of the spot rates to their advantage; this is, of course, almost as much speculation as the action of him who is merely betting on the exchange rate, since a trader who fails to cover a risk which can be covered and which is not an essential part of his trade is speculating, whether the risk appears to be favourable or not.

It follows that at times when the exchanges are troubled and speculation is rife, the forward exchange rates diverge quite sharply from the spot rates. In the autumn of 1933, for example, when the dollar was universally expected to decline, three months' forward dollars stood at 12 cents discount when the spot rate was \$5.05 to the pound. Such a rate means that, owing to the intervention of the speculators, any one who wanted to 'hedge' a genuine forthcoming exchange of dollars for pounds (arising, for example, from an export of British goods to the United States, or out of interest on investments in the United States) could do so only at the cost of selling his dollars at a discount equal to about 9½ per cent. per annum—a prohibitively high insurance premium. For this reason the method of insuring against exchange fluctuations provided by the forward exchange market is likely to break down when

it is most needed. Indeed, the forward exchanges have other limitations. The market is at all times 'narrow,' that is, quotations are available only for half a dozen of the most important currencies, and even in those currencies transactions cannot always be accommodated. Taken by and large, therefore, the forward exchanges provide only a limited and at times expensive means of reducing the risk of fluctuating exchange rates.

These deficiencies must not, however, be taken as decisive. In periods other than those of extreme instability of exchanges, the market in forward exchanges performs a service of considerable value to traders at comparatively small cost. The examples given above have, indeed, quoted premiums and discounts larger than are usual in normal periods, when the cost of insuring against exchange fluctuations does not usually exceed 1 or 2 per cent. per annum.

CONCLUSION

The main conclusions at which this chapter has arrived may be stated in four broad propositions. To state them briefly involves a certain amount of dogmatism and some of them are subject to qualifications. But the re-statement will assist to get the main outlines clear.

1. Each national currency is acceptable as money only in its own country, and since there is no international currency and no method of 'converting' one currency into another, every international payment involves an exchange of currencies.

2. Exchange necessitates the willing consent of at least two parties. This is what sharply differentiates international from intra-national transactions and puts difficulties in the way of some varieties of international payments.

3. Currencies are exchanged in the foreign exchange market. The ratios at which they are exchanged for one another are determined, proximately, by the relative urgency of the demand for and supply of each currency in exchange for others. More fundamentally, the rates of exchange are determined, in a way which does not lend itself to precise definition, by the relation existing between the *internal* purchasing powers of the different currencies.

4. The market in forward exchange enables traders to insure against the risks of fluctuations in the exchange rates. The premium or discount on forward exchange is determined, in normal circumstances, by the relationship between the prevailing rates of interest in the money markets of the different centres.

Throughout this chapter, however, one large assumption has been tacitly made. We have assumed that the foreign exchange market in each country is a 'free market,' that is, that no one is under compulsion either to trade or to refrain from trading, and that no limit is set to the free fluctuation of the exchange rates. We have been dealing with the theory of the foreign exchanges in normal circumstances. Our next task is to remove this assumption and investigate the working of the foreign exchanges in abnormal circumstances. We shall have to examine the working of the gold standard, a remarkable and ingenious mechanism for preventing rates of exchange from fluctuating—all the more remarkable in that it was never invented but, Topsy-like, 'just growed.' This we shall do in Chapter IX. But in the meantime we must devote some attention to the effects of deliberate State intervention in the foreign exchange market, inquire into its objects and its methods, and attempt to assess what its consequences are likely to be.

Chapter VIII

EXCHANGE MANAGEMENT AND CONTROL

THE OBJECTS OF EXCHANGE MANAGEMENT

IN this age of planned economies and governmental interference with private business it would be strange if the foreign exchange market were not subject to some degree of control. In point of fact, at the time this book is written, there is hardly a country in the world where some form of control, direct or indirect, effective or ineffective, is not exercised over the rates of exchange between the country's currency and the currencies of other countries, and the business that can be done in the foreign exchange market. In this chapter we shall have to examine the methods by which such control is exercised and its effects upon the monetary systems of the countries that exercise it. But before we set out on this task, it is as well to enquire why governments seek to control international transactions and the exchange values of their currencies.

The most important reason for controlling the exchange market is to make the rate of exchange different from what it would be without control. If the Government is satisfied with the rate of exchange determined by the free interplay of demand and supply, there is no need for management. If the managed or controlled rate is to be different from the free rate, three possible objects of the management can be distinguished. In the first

place, it may be desired to maintain the exchange value of a currency at a level higher than would prevail in a free market. Alternatively, it may be desired to depress the exchange value of the currency below the free level. Or lastly, management may be exercised to keep the exchange value of the currency roughly equal, over a long period, to the value which would equilibrate demand and supply but to avoid all the intermediate fluctuations to which a free market would be prone. For purposes of convenience, we may distinguish these three possible objects of management as 'over-valuation,' [1] 'under-valuation,' and 'avoidance of fluctuation'—and discuss them one by one.

Over-valuation is by far the most common object of exchange management. Indeed, until very recent years it could truthfully have been said that it was the only object of exchange management, since under-valuation and the avoidance of fluctuation have added themselves to the list of objectives of State policy only during the last decade. Why should a country want to keep the exchange value of its currency at a level higher than would prevail in a free market? There may be many reasons; but the three most important will suffice. During the last war the British Government maintained the pound at a higher value than it was inherently worth because of the necessity of buying all sorts of munitions of war from neutral countries, pre-eminently from the

[1] An 'over-valued' currency may mean either one which is standing at a rate of exchange higher than its equilibrium rate of exchange (see page 259) or one which is standing at a rate of exchange higher than would prevail in a free market. The two do not mean the same thing unless we can assume, as we obviously cannot, that a free market would always arrive at the equilibrium rate. In most contexts, 'over-valuation' is used in the first sense. Here it is used in the second; but having salved our consciences by this footnote we can conveniently ignore the slight logical ambiguity of the term.

United States. These goods were priced in dollars and had to be paid for in dollars, and it was easier to acquire the dollars if the value of the pound was kept up. Over-valuation is usually a desirable policy for any country which is under the sudden necessity of making very large purchases from abroad.

A second reason for over-valuation is very similar. There are many countries in the world, especially in recent decades, who have a large debt owed to foreigners and expressed in the foreigner's currency. Argentina and the British Dominions, for example, have borrowed vast sums in the London market, the loans being so-and-so many millions pounds sterling. Whatever the value of the Argentine peso or the Australian pound, these debts, and the interest on them, are payable in British pounds. After the last war, when the currencies of most of the Central European countries had collapsed, large debts were contracted by these countries both in pounds sterling and even more in American dollars. Now the position of these countries is very like that of Great Britain between 1914 and 1918. They are under the necessity of acquiring large amounts of pounds or dollars—not indeed to buy munitions, but to pay their debts—and the cost of their debt payments will at least appear to be less if their currencies are kept at a high level relatively to the pound and the dollar. Whether over-valuation is a sound policy for debtor countries, when all its consequences are considered, is a different question, to which we shall have to return shortly; but we can say that there is at least a preliminary case to be made for it.

The third reason for embarking upon a policy involving over-valuation is one of pure psychology; but it has none the less been very prevalent in the Continent of Europe in recent years. Within the last two decades all the nations of Continental Europe that fought in the

last war have suffered the agonies of extreme inflation—an inflation in which the rise of prices was so far-reaching that all forms of monetary property, including insurance policies, gilt-edged bonds, and savings bank deposits, were reduced to a fraction of their former value. When this period was finally brought to an end, the peoples who had lived through it retained a mortal dread of inflation; probably the only proposition upon which unanimous agreement could have been secured from the public opinions of both France and Germany—not to mention Austria, Poland, Hungary, and many other countries—in the interval between the two wars was that inflation must at all costs be avoided. Now a rise of prices inside a country is not the same thing as a fall of the external value of that country's currency, but, as we have seen in the last chapter, the two are closely connected. Or again, a small rise of prices is by no means as deadly in its effects as a prolonged and steep rise. Or finally, a rise of prices after a previous fall may merely restore an equilibrium which has been destroyed, it may be a curative element rather than a fresh disturbance. But so deep was the impression made by the inflation of the war and post-war years, that public opinion on the Continent refused to distinguish between large and small rises, or between the internal and the external values of a currency. It knew only that the inflation was not ended until the currency had been given a fixed external value, and that fixed external value must therefore be maintained at all costs, even if in the course of time it came to represent an over-valuation of the currency.

But over-valuation has certain very serious consequences. When a country's currency is over-valued, prices in that country are by definition higher than the corresponding prices in other countries. It follows that

the exporting trades are handicapped and imports into that country stimulated (unless prevented by tariffs, quotas, etc.). But this is only the beginning of the symptoms of over-valuation. Great Britain between 1925 and 1931, France in the years 1932–36, and other countries at other times, have learned that over-valuation is a most virulent malady, the more puzzling as the effects seem to be far larger than the cause. The handicap to the export trades and the stimulation of imports in competition with domestically produced goods do, of course, diminish the activity of trade and exercise a depressing effect upon all forms of enterprise and upon prices and wages in general. It is also to be expected that the effects would be larger in a country which, like Great Britain, is largely dependent upon foreign trade than in a country, like France, which is much more nearly self-contained. None of these facts, however, would seem to be sufficient to explain the sort of progressive paralysis which appears to creep over the whole economy of a country whose currency is over-valued. But, whatever the explanation, the facts speak for themselves, and the lesson they give is that over-valuation is one of the surest ways of producing a general economic depression.

Accordingly, many countries in recent years have begun to exercise management of the exchanges with the object not merely of avoiding over-valuation but of deliberately courting under-valuation. The effects of under-valuation are, in general, the opposite of those of over-valuation. Exports are stimulated, imports reduced, and support is given to the general level of prices. But there are serious limits to these effects. It is true that an under-valuation of the currency will tend to raise prices relatively to those in other countries. But this does not necessarily mean that prices will rise ;

it may only mean that prices in other countries fall. If the country whose currency becomes under-valued is a large and important part of the whole world market, the under-valuation will tend to lower other countries' prices, rather than raise its own.[1] On the other hand, a smaller country whose rôle in the world market is much less dominant may succeed by under-valuing its currency in raising its own prices rather than depressing the world price-level. The small country has another practical advantage when under-valuation begins to stimulate an increase in exports. An increase in a large country's exports would be much more noticeable and more likely to be stopped by the raising of trade barriers. On the other hand, even a large proportional

[1] This is what happened after Great Britain left the gold standard in September *1931*. *The pound fell very rapidly* and *was almost certainly* under-valued, at least at first. Now Great Britain is not merely a large part of the world market; for many commodities, especially foodstuffs, she *is* the world market. There was nothing in the fall of the pound that made the British public able or willing to pay more pounds for its wheat, meat, or butter. And since the British public's demand was the largest part of the whole demand of the world market, the sterling prices of these commodities became the world prices, and prices in those currencies which had not depreciated with the pound necessarily had to fall into adjustment. Great Britain did not share this further fall of price, and to this extent she was a gainer. But her prices were hardly raised at all, and the gain may be set down as a negative one. This is not a full statement of the factors operating at that time. It is highly probable that world prices would have fallen in any case, even if the pound had not depreciated. Indeed, there is no evidence that prices in gold countries (*e.g.* the United States) fell any faster in the twelve months after the departure of the pound from the gold standard than in the twelve months preceding. But whether the fall of the pound was or was not the sole or prime cause of the further fall of gold prices it was clearly *one* of the causes. In any case, it is hardly possible for an important commercial country to lever its prices up by this method. It is almost certain to have *some* effect in depressing the fulcrum, *i.e.* the world price-level. Archimedes said he could lift the earth if he had a long enough lever and a firm enough fulcrum. But though he could lift the moon by levering on the earth, he could hardly expect to lift the earth by levering on the moon.

increase in a small country's trade may pass almost unnoticed.

Another factor has to be considered. Under-valuation of the currency can only affect the *general* price-level of a country through the prices of imported and exported goods. The effect will accordingly be both more extensive and speedier in a country where foreign trade is a large proportion, than in one where it is a small proportion, of the total activity of the community. Taking these two factors together, we can conclude that under-valuation is most likely to be a paying proposition in a country like New Zealand, whose foreign trade is important to itself but unimportant in the world market; and it is least likely to be successful in a country like the United States whose foreign trade, though a sizeable proportion of the total of world trade, is a comparatively unimportant part of total American production and trade. It is also easy to see that a country whose main exports are staple foodstuffs or raw materials is more likely than an industrial country to find it necessary to resort to under-valuation, for the prices on the world market of these commodities usually fall during a depression far more than those of manufactured commodities. If the raw material exporting country under-values its currency, it may be able to maintain the prices of its main products *in its own national currency*, thus avoiding all the painful adjustments to a lower level of prices which would otherwise be necessary. Imported goods will, of course, thereby become dearer, so that the purchasing power of the raw material producers will be diminished. But it is far less productive of economic disturbance to take a reduction of purchasing power in the form of a rise in the prices of some of the things a country buys than in the form of a fall in the price of most of the things it sells. In the former

case the money incomes of its inhabitants are not affected; in the latter they are.

An interesting point relates to the alternatives of policy before a debtor country. We saw on page 271 that a debtor country whose debt is expressed in foreign currency can keep the cost of interest down by maintaining the value of its currency at a high level. On the other hand, if the debtor is a raw material producer, a small state, and one to whom foreign trade is important, it has a threefold reason for wishing to under-value its currency. Which argument is to prevail? No general answer can be given. For some countries, pushing down the currency until it is under-valued will so stimulate exports and so increase prosperity that it will become easier to purchase the foreign currency necessary to pay debt interest, even though more domestic currency has to be levied by the tax collector to pay for it. New Zealand and Australia, among other countries, have worked on these lines with success in recent years. On the other hand, a country like Hungary may have so heavy a burden of pound and dollar indebtedness, and may be so hemmed in by quotas and prohibitive tariffs, that under-valuation of the currency would make the payment of debt interest more, rather than less, difficult.

We have not been concerned here with the morality of exchange policy—indeed, considerations of morality may seem to be strange interlopers in such a sphere. But the fact nevertheless remains that under-valuation—deliberate under-valuation—is an immoral policy. In a purely rational world it ought to be enough to say of it that it is selfish. Any advantages it may confer upon one nation are probably obtained at the expense of other nations, and are consequently not gains at all, since in an economic sense nations are all members one of another. But in the world as it is, it is perhaps as well that pure

reason is backed up by a sanction. Under-valuation i: a game that any one can play ; but if every one play at it and currencies enter upon a competition to se which can be pushed furthest below its real value, i quickly develops into a race to render all currencie worthless. There have been times in the last few year when a race in competitive depreciation has seemec perilously close, but its obvious madness and th destruction it would inevitably bring to all have hithert been sufficient to deter the would-be competitors.

The third possible object of exchange management— the avoidance of fluctuation—barely needs discussion In theory it is admirable : the market would enjo the merits both of stability and of flexibility. But i practice it is difficult to define and to execute. Th objective should be to prevent those fluctuations of th free market rate which are purely adventitious o temporary without interfering with changes of rat which correspond to real alterations in the respectiv values of the different currencies. Looking backwards it is easy enough to distinguish what was and what wa not a temporary fluctuation. But the managers of sucl a policy have to make their decisions in the present, no in the future, and the temporary fluctuation has n distinguishing characteristic by which it can be identified In the circumstances, it is hardly surprising if th 'avoidance of fluctuation' policy becomes somewha more opportunist in practice than in theory. The bes known example of this type of policy is that pursued b the British Government since 1932 with the aid of th Exchange Equalization Account. The aim of th Account's operations has been neither to over-value no to under-value the pound, but merely to 'iron out temporary ups and downs. In practice, there ar reasons for believing that there have been times bot

of under-valuation and of over-valuation of the pound since the Account was set up.

INDIRECT CONTROL

Having discussed the objects of exchange management, we now turn to the methods. The only way in which management can be made effective is by influencing the supply of and demand for currencies in the exchange market. However much the market may be controlled, the number of pounds sold on any one day must equal the number of pounds bought. Controlling governments accordingly have two broad alternatives of policy. If the rate of exchange at which demand and supply would be equal in a free market is not to their liking, they can *either* enter the market on their own account, adding to the demand for or the supply of the currency in which they are interested, *or* they can prevent some of the existing demand or supply from reaching the market. If the British Government, for example, wants to put the pound up, it can either add to the demand for pounds by itself going into the market and bidding for pounds, or it can forbid some of the people who are offering pounds in the market to continue to do so. Either action will increase demand relatively to supply and raise the exchange value of the pound. Alternatively, if the British Government wishes to put the pound down, it can either offer pounds for sale on its own account or restrain some of the people who are demanding pounds from continuing to do so. The great difference between the two methods is that one increases and the other restricts the number of transactions in the market. The one leaves the market open to all comers but adds an artificial element to it; the other interferes with the free access of the public to the market.

These two broad methods of control can be distinguished by the names of Intervention and Restriction.[1] In the next two sections of this chapter we shall examine them in turn, discussing the methods by which governments directly achieve their purpose of influencing the rate of exchange. But as a preliminary we must devote a brief mention to certain indirect methods of achieving the results—devices, indeed, which may be applied for entirely different reasons, but which nevertheless have an effect on the rates of exchange.

One obvious and frequent source of influence upon the foreign exchange market is the customs tariff. When a government imposes a tariff it restricts the volume of imports. This necessarily diminishes the supply of its currency in the foreign exchange market, since less foreign currency has to be purchased to pay for imports. Accordingly, there will be a tendency for the currency of the nation imposing the tariff to rise in value. There is, of course, nothing to prevent every other country from raising its tariffs and thus setting in motion a tendency to raise the value of its currency. Indeed, if every country raises its tariff equally there will be no change in the relative values of any of the currencies. But the fact remains that the existence of any import duty tends to make the value of the currency of the country imposing it greater than it would be if the duty did not exist and everything else remained the same. By the same reasoning it can be shown that a duty on

[1] The reader will find a much more elaborate classification of methods of Exchange Control in *Exchange Control*, by Paul Einzig (Macmillan, 1934), to which this chapter owes much of its nomenclature. Dr. Einzig enumerates no less than forty-one distinct methods. In the last year or two, the phrase 'exchange control' has frequently been used in a sense synonymous with Restriction only. It is used in the wider sense in this chapter, though the alternative term 'management' has been used in one or two places where ambiguity might arise.

exports will tend to depress the value of the currency. A bounty on exports will, of course, raise the currency, a bounty on imports (if such a thing can be imagined) would depress it. Export bounties are not infrequent; export duties are not unknown but rather rare; import bounties are virtually non-existent.

A slightly more subtle influence is exerted by changes in interest rates. A large number of the transactions in the foreign exchange market are not concerned with the purchase or sale of goods and services, but with movements of capital and investments. An increase in the rate of interest in London will attract liquid capital and banking funds from other countries, and make it more profitable to British banks and bankers to keep their liquid funds at home rather than invest them abroad. In so far as the rise in the rate of interest affects the yield that can be obtained on investments, it will tend to dissuade British investors from investing their money abroad. A debtor country which raises its rate of interest can sometimes attract large amounts of foreign money for investment in its industries, as is most clearly shown by the experience of Germany between 1924 and 1930. Thus through many channels a rise in the rate of interest increases the demand for, and diminishes the supply of, the currency, and consequently raises its value.

Several observations can be made about these indirect methods of influencing the exchange rates. In the first place, they may be applied for reasons other than exchange control. Customs duties, of course, are most often imposed in order to give protection to some industry, or to raise revenue for the national Treasury. Export bounties are granted to assist the exporting trades. Rates of interest are varied as part of the policy of controlling the domestic credit situation. But they all *may*, of course, be adopted with the deliberate intention

of influencing the exchange rate ; and whether or no they are adopted with that intention they undoubtedl do exercise an effect upon the course of the foreig exchange market. But, secondly, that effect is indirect there is no direct interference with the freedom of th market ; the exchange rate is influenced rather tha directly managed. And, thirdly, their operation i subject to severe limitations. The imposition of tarif is perhaps the least limited ; but even tariffs cannot b clapped on *ad infinitum*, and the effect of tariffs on th exchange rate may be entirely offset by the tariffs o foreign countries. Export bounties are obviously limite by the depth of the public purse. Changes in interes rates are also subject to limitations : the rate of interes cannot be raised beyond the point where it seriousl hampers domestic business ; its effect can be offset b increases in the rate of interest in foreign countries ; an any increased movement of capital induced by a chang in interest rates is bound to set on foot movements o interest and repayment in the opposite direction in som near or distant future.

These methods of indirect control, therefore, thoug they are by no means negligible, are not nearly stron or precise enough instruments for a government whic aspires to bring the exchange rates under close control We must therefore pass on to the more direct method of management.

INTERVENTION

A government may intervene in the foreign exchang market either to hold the value of its currency up or t hold it down. Until very recent years the former wa much more common, since the discovery of the merit of under-valuation is, virtually speaking, a matter o

the depression that began in 1929. When Intervention is practised with the object of keeping the currency up to a fixed exchange value, the currency is said to be 'pegged' at that value, and 'pegging' is much the most frequent form of Intervention. Thus, during the war of 1914–18, the British Government 'pegged' the pound sterling at \$4.76½. How great a degree of over-valuation this entailed was shown in March 1919 when the 'peg' was withdrawn and the pound fell within a year to \$3.40. 'Pegging' has in the past always meant 'pegging up,' but we can invent the term 'pegging down' for the practice that has grown up among some governments during the last few years of maintaining their currencies at a fixed under-valuation. Thus the rate of exchange between the New Zealand pound and the pound sterling has been maintained since 1933 at £N.Z.125=£100 (or £N.Z.1=16*s.* sterling). For the first few years after this rate was established the New Zealand pound would almost certainly have been given a higher value in a free market; the action of the New Zealand authorities was thus a form of 'pegging down.'

Both 'pegging' and 'pegging down' involve the maintenance (at least for long periods of time) of fixed rates. Intervention does not necessarily mean fixed rates. A government might, for example, intervene to support or depress the value of its currency without troubling about a fixed rate. But the principles and technique of the action are the same in either case, and we shall be justified in treating 'pegging' and 'pegging down' as the typical examples of Intervention.

If a government is 'pegging' its currency at a value higher than would obtain in the free market, it follows by definition that the free market demand for the currency at that rate of exchange must be less than the

supply. If the Government is not willing to restrict the supply (which would mean an interference with the freedom of the market and would therefore constitute Restriction, to which we shall come in the next section) it must make up the demand to the amount necessary to take all the supply at the 'pegged' rate. Since the British Government during the last war wished to preserve the high value it had set for the pound, it had to stand ready to buy at that value any pounds which the market would not take, and to be able to buy them it had to be able to give foreign currencies in exchange. Conversely, in the case of 'pegging down,' the Government must be ready to supplement the supply side of the market, to offer as much of its currency as the market wants and to take foreign currencies in exchange. A government which is 'pegging' its currency must be in a position to pay out foreign currencies and receive its own currency; a government which is 'pegging down' its currency must be in a position to pay out its own currency and receive foreign currencies; and both must be prepared to go on indefinitely unless they want either to resort to Restriction or to fail in their purpose of controlling the rate of exchange.

The ability of the Government to control the exchange rate by Intervention thus depends entirely upon the resources of which it can dispose for the purpose. In the case of 'pegging,' the limit thus set is likely to be comparatively narrow, since the necessary resources take the form of foreign currencies. The pound was 'pegged' to the dollar during the last war only because of the ability of the British Government to borrow dollars in the United States and to mobilize the dollar securities owned by British companies and individuals. Except in times of emergency, governments are not likely to be willing to borrow continuously in foreign centres in

order to support their currencies; and if they were willing, there is no reason to believe that the credit of any foreign country would be considered good enough to withstand continuous heavy borrowing for such an unproductive purpose. Loans may be raised (or the foreign securities of private citizens impounded) for short emergencies or upon special occasions.[1] But apart from these cases, a government can 'peg' the exchange value of its currency only if it possesses resources in foreign currencies, and even then it can continue only until its resources are exhausted.

The limitations upon 'pegging down' do not, at first sight, seem to be quite so narrow, for the resources that are necessary in this case consist of an adequate supply of the intervening country's own currency. A country which is 'pegging down' is gaining, not losing, foreign currencies. But there are limits, nevertheless. A government can, it is true, possess itself of a stock of its own currency more easily than it can possess itself of a stock of foreign currencies. But it can do so only in one of three ways—by taxation, by borrowing from the public or by the creation of new money (borrowing from the Central Bank or just plain printing). Taxation we can virtually rule out; few electorates would be likely to tolerate continuous taxation for the sake of piling up balances in foreign countries. Borrowing is slightly more feasible. In theory, it would be possible for a government to borrow from its own public, use the proceeds to 'peg down' its currency, and invest the foreign currency thus obtained in such a way as to get

[1] Such as the stabilization of a currency at a rate which may need support at first but, it is believed, can be maintained without Intervention after a brief transitional period. In the period of stabilization of European currencies between 1924 and 1928, nearly every stabilization was accompanied by a loan, or the promise of a loan, of foreign exchange to support the new rate during the early months.

a yield equal to the interest it would have to pay on its borrowings. Moreover, this process can acquire very large dimensions. Between 1932 and 1937 the British Government borrowed no less than £550 millions in its own money market for use, if need be, in buying foreign currencies or gold. But borrowing could hardly go on for ever. It would involve a steadily mounting internal debt and the increasing problem for the Government of finding safe and remunerative foreign investments for its steadily mounting hoard of foreign currencies. The third method, the creation of the necessary supplies of money, is also subject to a practical limit. The money thus created would be used immediately by the Government to buy foreign currencies. That means that it would be handed to the sellers of the foreign exchange ; it would immediately enter into circulation and add to the supply of money already in existence. In other words, it would initiate an inflation. Now, so far as the technical problem of ' pegging down ' the currency is concerned, an inflation would help, because any rise of prices would tend to lower the equilibrium value of the currency and make it no longer necessary to ' peg down ' in order to maintain the low value of the currency. Thus, if the Government's intention is not to maintain a permanent under-valuation but merely once and for all to lower the equilibrium value of its currency, this method has certain—theoretical—attractions. But if this method is adopted in an attempt to keep the exchange value of the currency *permanently* below its equilibrium rate—to push it further down every time the equilibrium rate fell—it could only result in a disastrous internal inflation.

' Pegging down ' is not, therefore, subject to quite such rigid limits as ' pegging up.' But it is nevertheless an expensive and hazardous proceeding for any country which adopts it as more than a temporary expedient.

We conclude, then, that Intervention is temporarily, rather than permanently, possible. This conclusion applies both to Intervention with the object of over-valuation and to Intervention with the object of under-valuation, but the technical difficulties are greater, and the limitations of the policy accordingly stricter, in the former case than in the latter.

A word remains to he said about the policy of Intervention to avoid fluctuations of the exchange rates. This policy involves over-valuation at some times and under-valuation at others.[1] Accordingly, the government applying it needs to have resources in foreign currencies at some times and in its own currency at others. The best-known example of this policy is the Exchange Equalization Account set up by the British Government in 1932. To start off with, this Account borrowed a large sum in pounds from the British public.[2] It was then in a position to keep the pound *down*, but not to keep it *up*. But in the process of keeping the pound down, the Account acquired stocks of foreign currencies (or of gold, which was convertible into foreign currencies). In this way, during the first few months of its operations, the Account accumulated a certain amount of foreign currency. But in the autumn of 1932 the tide set so strongly against the pound that this stock of foreign currencies had to be used up in trying to keep the pound *up*. When it was exhausted, the Exchange Equalization Account was powerless to prevent the further fall of the pound. In the spring of 1933, however, the tide turned once more, and the Account,

[1] That is, over-valuation or under-valuation relative to the rates which would be determined by a free market. See footnote on page 270.

[2] The sum was £150,000,000 at first, increased in 1933 to £350,000,000, and later to £550,000,000. The Account also had at its disposal at its inception about £25,000,000 worth of foreign currencies.

by preventing the pound from rising as rapidly as it would have done in a free market, rapidly replenished its stock of foreign currencies. Since then it has intervened now on one side of the market, now on the other, shifting its resources from pounds into foreign currencies and back again as occasion requires.

Such a policy, if it is to be successful, necessarily implies that neither over-valuation nor under-valuation is consistently pursued. If this were not so, if the Exchange Equalization Account were on balance holding the pound down more than holding it up, or vice versa, one or other of its funds would rapidly become exhausted, its sterling reserve in the first case and its foreign currency reserve in the latter case. It follows that a policy of Intervention with the object of avoiding fluctuations cannot prevent the more fundamental changes in the equilibrium rates of exchange between currencies from being reflected in the market rate of exchange. It can hope only to iron out the day-to-day, more or less sporadic and adventitious fluctuations which characterize any large and speculative market.

Thus the possibilities of Intervention are limited. The only policy that can be followed permanently is the relatively unambitious one of avoiding minor fluctuations. Intervention to secure deliberate over-valuation or deliberate under-valuation is subject to limitations which confine it within the bounds of a temporary policy. In addition it is likely to be expensive and to have dangerous economic effects outside its immediate influence upon the exchanges.

EXCHANGE RESTRICTION

In the turmoil of recent years, Intervention has proved for many countries to be far too weak a weapon

of control, and they have resorted to the more powerful device of Restriction. The fundamental difference between the two methods is that a government that is practising Intervention must add to the volume of transactions in the foreign exchange market and must have, or expensively acquire, resources in foreign currencies to enable it to do so, whereas a policy of Restriction involves not an artificial *addition* to the *demand* for the country's currency, but a compulsory *reduction* by the government of the *supply* of its currency coming into the market. Certain persons, or categories of persons, who would otherwise have offered the currency in exchange for foreign currencies are forbidden to do so. Demand is thus increased relatively to supply, and the value of the currency is maintained.[1]

If we are to keep to a strict definition, we must say that anything that diminishes the turnover of the foreign exchange market constitutes Restriction. This would include tariffs and import quotas, which, by preventing the import of goods, reduce the supply of currency in the foreign exchange market to pay for them. It would also include the requests made by the British Government to the British public from time to time in recent years to refrain from buying foreign exchange except in payment for goods, in meeting contracted debts and in financing necessary foreign travel, and the measures taken on more than one occasion to prevent the issue of foreign loans in the London capital market. But it will be much less confusing to confine our discussion to those forms of Restriction in which the buying and selling of

[1] It is possible theoretically to conceive of a government restricting the demand for its currency in order to keep it at an under-valued level. But there would be serious practical difficulties (*e.g.* it would involve the *government forbidding its export industries to receive payment for their exports*); and in any case it has never been tried, so we may forget about it.

foreign exchange is centralized under the controlling eye of the Government and access to the market is barred by law to certain classes of transactions. If we accept this definition, we can say that the distinguishing characteristic of a system of Exchange Restriction is the existence of laws making it a criminal offence for anybody, without permission from the authorities, to exchange the national currency into any foreign currency.

Exchange Restriction in this sense first appeared (outside Russia) in Germany and Austria in the financial crisis of 1931. Germany has ever since been the foremost exponent of Exchange Restriction. Most of the refinements have been first tried out by the Germans, and it is there that the control has been most strict. Evasion of the currency regulations was punishable by death in Germany long before the outbreak of war in September 1939. Until the war, Exchange Restriction was largely confined to two groups of countries in Central Europe and South America. On the outbreak of war, however, restrictions were imposed by France, Great Britain, and the British Dominions, followed by some of the neutral countries, until now there are more currencies restricted than free.

The variants of Exchange Restrictions are very numerous and the complications extraordinary. Any attempt to provide for every contingency and mention every example would be bound to create the utmost confusion in the reader's mind. Accordingly, no effort will be made here to do more than sketch the main principles involved and to distinguish the chief varieties of method and purpose.

Exchange Restrictions were originally imposed in the Central European countries in 1931 as the only available means of bringing the supply of their currencies being offered in the market into accordance with the demand

for them without a catastrophic fall in the exchange value. These countries had all, for some years before 1931, been borrowing heavily from foreign countries. Not only was the burden of paying interest very heavy, but many of the loans were on a short-term basis, on which the creditors could demand repayment at any time. In the crisis of 1931 the bulk of these short-term debts were called home. The supply of marks, crowns, pengös, and the rest was thus swollen not only by interest but by the much larger amounts of principal. Moreover, this was at a time when the demand for these currencies, which originates from payments for their exports, was seriously reduced by the collapse of prices and the decline in international trade. In these circumstances, if nothing had been done, there would have been a very large fall in the exchange values of these currencies. But it is doubtful whether this fall would have restored equilibrium. For one thing, the debts were mainly contracted in terms of dollars or sterling, so if, say, the mark fell in value, they would merely cost more marks to repay; the supply side of the equation would increase automatically with every fall in the exchange value of the mark. Secondly, the way in which a change in exchange rates usually restores equilibrium is by persuading some of those who, before the change, were just prepared to offer the currency for exchange, to hold back from doing so when the currency becomes cheaper. But in this particular case it is very doubtful if any of the creditors would have stayed their hands, even apart from the protection they enjoyed which has just been mentioned. They were fleeing the country because of their fear of an impending economic collapse, not because of any 'nicely calculated less or more,' and an exchange depreciation would merely confirm their fears. Lastly, it was less than eight years since the end of the great

inflation in Germany, and the people had been taught to believe that their one security against a recurrence of that horrible calamity lay in a firm adherence to a fixed gold value for the currency. For these reasons the governments of these countries came to the conclusion that the only thing for them to do was to maintain the exchange rates and compulsorily to cut down the supply of their currencies coming on to the market until it was no more than could be absorbed by the demand at that rate. This meant, in the first place, a prohibition on the withdrawal of foreign capital. In some cases, the individual debtor inside Germany or Austria or Hungary was not relieved of his obligation to repay his debts on demand or on maturity; but the repaid sums were merely paid into an account in the Central Bank standing in the name of the foreign creditor. These accounts could not be converted into foreign currency—that is to say, they were 'blocked.'

It is possible for the same dilemma to arise where there is no problem of repaying the principal of debts, but out of difficulties of balancing trade in goods alone. For example, a country may export only one or two commodities for which there is virtually no demand in time of depression, while it has to import many articles of necessary consumption as well as pay interest on its past borrowings. (This was the position of several South American countries in the depression years.) In these circumstances, the rate of exchange might have to move a very long way before exports were sufficiently stimulated and imports sufficiently choked off to produce a balance. It may be preferable to produce the same effect more directly by restricting exchange transactions. But another way would be to impose very high tariffs, or complete prohibitions, on imports. It would not be right to say that Exchange Restriction never arises out

f purely commercial difficulties. But it is right to say ıat it arises most frequently and most appropriately ut of financial difficulties. Usually these financial ifficulties are connected with the payment of interest n debt or the repayment of principal. But they might qually arise out of a desire on the part of a country's ıhabitants to export their own capital. For example, xchange restrictions were not imposed by Great Britain nd France in September 1939 for the prime purpose f *preventing their foreign creditors from securing* ›payment of their debts—on the contrary, most of these reditors were paid off. The object was to preserve the old and foreign currency reserves of the two countries, and › see that these reserves were not used up in facilitating ıe export of capital from the two countries, but were holly available for buying munitions and necessary ıw materials. In general, the purpose of Exchange estriction is to reduce the supply of a country's currency oming on to the market, and the part of the total supply ıat is first cut off is, almost always, that part which riginates from the export of capital sums, whether they re debts owed to foreigners or capital owned by the tizens of the restricting country, or—an intermediate ıse that has arisen in Germany—the property of citizens ho have been driven out of their native country.

These capital sums, as has been pointed out, remain blocked' inside the restricting country. If they are ıpital belonging to residents in that country, no great ırdship ensues; these citizens cannot, it is true, achieve ıeir desire to place their money abroad, but they still ıve it to dispose of in their own country. Foreigners · expelled citizens, however, cannot use money that is blocked' in another country. An Englishman might ıve a million marks 'blocked' in Germany, but that ould not prevent him from starving in London.

Accordingly, the foreign owners of blocked funds are usually prepared to sell them at a discount, if by so doing they can get their money out. Sometimes this happens without the connivance of the restricting authorities, though not against their wishes. Thus under the British exchange regulations as they were in force in the early months of 1940, some foreign-owned funds were blocked in London in the sense that they were not allowed to be exchanged for foreign currencies in the officially controlled market in London. But there was nothing to prevent a foreigner owning blocked sterling from selling it to another foreigner who might want it, for example, for paying for British goods. Accordingly, an unofficial market sprang up in New York, and foreign owners of sterling who were refused permission to convert their sterling into dollars at the official rate of \$4.04=£1 in London could do so in New York at the unofficial rate, which varied between \$3.70 and \$4.00 to the pound. The only effect was that these foreigners got rather less foreign currency for their pounds than if they had been allowed to use the official market. It was open to the British authorities at any time to close this avenue of escape for foreigners by prohibiting them from selling their blocked balances to anybody. But it was considered preferable, at least for a time, to let these foreigners withdraw their money from London, provided they paid a fee (by accepting a lower price) for the privilege of doing so. By various means, the supply of pounds that their foreign owners were free to dispose of as they chose—'free pounds'—was gradually restricted until, in the summer of 1940, the market in them virtually disappeared and the official rate—which applied only to transactions approved by the authorities—alone remained.

Nearly every restricted currency has at some time

been bought and sold in this way at less than the official rate. Sometimes this trading has been wholly illegal; it took place at the so-called 'black bourse,' and those engaging in it laid themselves open to severe penalties. Sometimes it has been tolerated by the authorities, as in the British example just cited. Sometimes the authorities have themselves taken the initiative in defining which balances could be used for what purposes, and in fixing the discounts at which they could be sold for foreign currencies. Germany has taken the lead in this, and there have been at different times in the last few years a very large number of different varieties of German marks, known as Registermarks, Blockmarks, Effektensperrmarks, Sondermarks, Handelsmarks, Degomarks, and many others, and selling in London at prices ranging from 2*d.* to 1*s.* 9*d.* each.

This device of releasing funds at a discount was probably adopted in the first place in response to the pressure of foreign creditors and as a concession to them. But it was not long before the restricting countries began to see that there were great advantages for them in a system which, in effect, created two quite different prices for the same currency. When foreign creditors sell, say, marks at a low rate, who buys them, and for what purpose? If the purchaser is some one who wants marks in order to pay for German exports, the fact that he can get his marks cheap is equivalent to a reduction in the price of the exports; it will stimulate sales in exactly the same way as an ordinary depreciation of the exchange rate. Accordingly, if the authorities can establish control of these sales of the currency at a discount, and very carefully define the varieties of transaction that are permitted, they can draw great benefits from the system. It is their endeavour so to arrange matters for themselves and their citizens that whenever they are *offering* their

currency and *taking* foreign currency in exchange (*e.g.* paying for imports), they shall use the rate of exchange that gives their currency the higher value, and that whenever they are *demanding* their own currency and *giving* foreign currency in exchange (*e.g.* bringing home the proceeds of exports) they shall be able to acquire currency at the lower price. They sell at the high price and buy at the low. This necessarily implies that foreigners buy at the high price and sell at the low. The whole system consequently depends upon the willingness of foreign creditors to sell their 'blocked' holdings of the restricted currency at the low price as a means of getting them out. But it also requires that when the foreign creditors sell at the low price they shall sell to the restricting government and not to some other foreigner who, if he wants some of the restricting country's currency, must be made to pay the full price for it. The system therefore depends upon the ability of the restricting government to keep different varieties of money in different watertight compartments or else to maintain two varieties of its currency, both of equal value *inside* the country, but of unequal value *outside* the country. That is, it depends upon the ability effectively to 'block' the creditors' funds. If the restricting country can appear to be getting the best of both worlds, it is only because the foreigner, especially the foreign creditor, can be made to take the worst of both worlds.

The precise system adopted varies, of course, with the circumstances of each case. In Argentina, for instance, the chief aim of the Government is to provide itself with enough foreign exchange to pay the interest on the Government debt—although it is not nearly so solicitous for those of its private citizens who owe money abroad. Accordingly, its foreign exchange regulations are framed with the primary object of providing cheap

foreign exchange for paying the Government's debts, and dear foreign exchange for other payments to foreigners. Every Argentine citizen (or foreign resident in Argentina) who comes into possession of foreign currencies, whether by exporting goods and selling them in foreign countries or in any other way, is compelled to sell them to the Argentine Government, taking pesos in exchange at a fixed rate. The Argentine Government thus comes into possession of a large volume of foreign currencies. It uses what it wants to pay its own debts to foreign currencies. The remainder it puts up to auction among the holders of pesos who want to exchange them into foreign currencies. Thus, until the outbreak of war in September 1939, the official rate at which the Argentine Government bought foreign exchange was 15 pesos per £ sterling. But the rate at which the foreign exchange was sold fluctuated around 17 pesos per £ sterling. The Government thus got the foreign exchange it needed at the lowest price and in addition made a profit on the foreign exchange it did not want. Those who suffered were the exporters (largely foreign interests in Argentina), who had to sell their foreign currency at the low price (that is, the low price in pesos, or, to say the same thing in another way, they had to buy their pesos at the higher rate), and those persons other than the Government who owed money abroad (these also were largely foreign interests, such as the British-owned railways) and had to buy foreign currency at the high price.

The objects of Germany's restrictions have been entirely different. For several years before the actual outbreak of the war in 1939, Germany was living in conditions of a war economy. German industry is dependent on imported raw materials, and the power that a strict exchange control gave the Nazi Government over the activities of German industry, by rationing the

supplies of necessary materials, was a powerful weapon in their armoury of general industrial control. But, apart from that, the German efforts were directed towards securing the largest possible amounts of imported raw materials, both for use and for accumulation in war reserves, and, in payment, towards forcing out the *largest possible volume of German exports.* The payment of debts, so far from being the object of the devices adopted, was a very secondary matter, to be indulged in only if the payment of a creditor could be coupled with some advantage to the German war economy. The system they built up was very complicated and extremely shrewdly managed. For some goods that Germany had to sell the outside world's demand was very elastic—that is to say, a reduction in the price would lead to much greater sale, and therefore to much larger proceeds in foreign exchange—and exporters of these goods were given the fullest benefit of being able to calculate their prices in depreciated marks. For other goods, the world could be made to pay the German price, and no reductions were made. The whole system was run in such a way as to screw out of the world the maximum possible amount of foreign currencies for use in purchasing the raw materials for munitions.

EXCHANGE CLEARINGS

It must not, however, be imagined that manipulations of this sort, which were designed to out-bargain the foreigner in every possible way, were accepted without protest or reprisal by foreign countries. One very effective form of reprisal that was adopted by several countries was the exchange clearing, whose nature can best be explained by means of an actual example. In

1929, the last approximately normal year before the depression, Germany exported 627 million Reichsmarks of goods to Switzerland. In the same year she imported Rm.318 millions from Switzerland. Following the usual terminology we can say that the balance of trade between the two countries was unfavourable (or 'passive') to Switzerland. In invisible items and on capital account there was a net balance of payments *to* Switzerland (to pay for German tourists in the Alps and in interest on Swiss loans to Germany), but when all items, visible and invisible, are included, it is almost certain that Switzerland made more payments to Germany than she received. Now, when Germany 'blocked' the interest on Swiss loans, Switzerland had the possibility of a very effective reply. She passed a law obliging all Swiss citizens who had payments to make to Germany to make those payments to the Swiss National Bank instead of to the Germans to whom they were due. With these payments in its hands, the Swiss Government threatened Germany that they would not be forwarded unless the payment of interest due to Switzerland by Germany were resumed. And since the hostage which Switzerland had seized was more valuable than the original prisoner, the threat was very effective. Eventually an agreement was concluded between the two countries by which all payments between them were to be offset. A Swiss owing money to a German pays the amount into the Swiss National Bank, which uses it to pay another Swiss who is owed money from Germany, whether for tourist expenses, or for goods sold or for interest on past loans. Similarly, a German debtor to Switzerland, instead of remitting the money, pays it into the Reichsbank, whence it is issued to pay Germans who have money owed them by Switzerland. All that passes between the two countries is the notification from one bank

to the other that such and such payments have been made.

This is the principle of the exchange clearing. Similar agreements have been made between a great many pairs of countries in the last few years. The details vary. Sometimes the payments from country A to country B are so much larger than those from B to A, that A, after meeting all sums due to its citizens from B, places the balance at the free disposal of B. In some cases the amount of this free balance is specified from the beginning in the agreement. But the fundamental idea of exchange clearing is always the same—namely, the offsetting of payments, so that transactions do not have to pass through the foreign exchange markets.[1]

In the years between 1931 and 1939, exchange clearing agreements were concluded between a very large number of states in Europe. Germany also had what amounted to exchange clearing arrangements with the states of South America. Of these hundreds of agreements, hardly any two were similar. Often, as has been mentioned, they provided for some part of the

[1] A less rigid variety of agreement is that known as an Exchange Payments Agreement, of which the 1937 Agreement between Great Britain and Germany was an example. In this case, Great Britain imposed no compulsion on her citizens. In other words, payments from Britain to Germany were free, so far as the Bank of England was concerned. But German citizens had to surrender any foreign currencies they received to the Reichsbank, from whom alone they could purchase foreign currencies to make payments abroad. The Agreement stipulated that a certain percentage of the pounds the Reichsbank received would be earmarked for the purchase of goods from Great Britain, and a certain further percentage for the payment of interest on British loans to Germany, the repayment of overdue loans, etc. It is worth noting, however, that the Agreement was only concluded after the British Government threatened to impose a full clearing system, which it could easily have done, since British payments to Germany considerably exceeded German payments to Britain.

proceeds (the so-called *Spitzen*) to be free for conversion into foreign currencies. But Germany, the largest of the exchange-clearing countries, did not grant many concessions of this nature. Moreover, the *Spitzen* were always calculated on the low side. Exchange clearing agreements, in fact, tended to equalize the trade between the two signatories. For example, Hungary found at one time that she had balances piling up in Switzerland which could only be used to buy Swiss goods. Rather than write these sums off as a total loss, Hungary bought goods in Switzerland that she had previously bought elsewhere, or even goods for which she had little use; Hungary was at one time flooded with Swiss watches. Since most international trade follows channels that involve several countries, this effect is damaging to general prosperity. Thus, in normal times, the British Dominions sell raw materials to Germany, Germany sells manufactures to Scandinavia, and Scandinavia sells timber to Great Britain. It is by this channel that Great Britain receives, in the shape of timber, some of the interest on her overseas investments. Between no pair of countries in the chain is there an equality of trade—if exchange clearing forces equality, it does so at the cost of wrecking the whole business, which was profitable to all participants. This disadvantage of the exchange clearing could have been diminished if it had been possible to negotiate agreements between whole groups of countries. Generally speaking, this did not prove possible—at least until the outbreak of the war, when Great Britain, having imposed exchange restrictions, began to negotiate exchange clearing agreements. The agreement between Great Britain and Sweden which was reached early in 1940 provided that pounds earned by Sweden by sales in Great Britain could be spent either on British goods or

on goods from other countries in the 'sterling area,'[1] or on goods from Belgium and Brazil, these two countries being chosen because Sweden's purchases from them normally amount to just about the difference between her sales to Great Britain and her purchases of British and 'sterling area' goods. It will be interesting to see how this variety of multilateral clearing develops.

The exchange clearing has, however, the merit, as compared with pure exchange restrictions, that it permits some expansion of trade, albeit within severely circumscribed channels. Many countries, having restricted the use of money in international transactions, have gone even further in organizing moneyless trade, or barter. With an exchange clearing there is a use of money within each country; Swiss debtors of Germany pay Swiss creditors of Germany, while their German counterparts make similar payment; but in each country it is done through the Central Bank, and the two Swiss parties, or the two German parties, are not known to each other. Some countries, however, arrange for trade which is even closer to barter. Traders exchange wheat directly for steel, and the chief use of money in the transaction is as a unit of account, to calculate how many hundredweight of wheat exchange for how many tons of steel. Since each side in these transactions is calculated to compensate the other, this form of trading is known as compensation trade. Most of these transactions involve, of course, a money exchange in each of the countries concerned; thus the Roumanian exporter of wheat does not himself use the German steel he gets in exchange, he sells it to somebody else. But the difference

[1] The *sterling area* consists of those countries who keep their currencies stable in terms of the pound sterling. It includes the whole British Empire (except Canada and Hong-Kong) and a fluctuating group of other countries.

between clearing and compensation is that permission will not be given for a compensation transaction until both sides, the export of goods and the import of goods, have been arranged, so that there is neither a financial payment between the two countries nor even a payment into an account at the Central Bank belonging to the foreign country.

Some countries have used these various modifications of exchange restriction as a method of gradually removing the whole system of restrictions. The best example of this was Austria before it was overrun by the Nazis in 1938. Exchange restrictions were originally imposed in Austria to prevent the export of foreign short-term capital lent to the country. But after the first panic was over, and arrangements had been made with the short-term creditors to spread the repayment of their capital over an extended period, it was realized by the Austrian authorities that it would be quite possible for the Austrian currency, the schilling, to stand on its own feet, provided its value was once lowered to bring it into line with those currencies, like the pound sterling, which had meanwhile depreciated. But the Austrian people had as great a dread of inflation as any other, and for the Government to have made a blunt announcement that the schilling was to be lowered in value might have started another panic. The method adopted was to fix exchange rates in the various exchange clearing and compensation agreements that were lower than the formal 'official' rate, and also to withdraw, one by one, the prohibitions against trading in the 'black bourse,' which thus became grayer and grayer, until it was finally recognized to be white. Thus Austria was eventually able to remove all her restrictions save only those that prevented the export of capital.

To the ingenious Nazis, however, the exchange

clearing came to represent a powerful weapon of building up their war economy. Just as they turned exchange restrictions to their advantage, so they discovered how to use exchange clearings, which were originally forced on them as a reprisal. To understand how this was done, it is necessary first to appreciate the difference between a peace economy and a war economy. In a normal peace economy, especially a depressed one, foreign trade is chiefly regarded as a means of providing employment. Exports are pushed because they provide work, imports are discouraged because they are suspected of competing with domestic labour. But in a war economy, where there is a shortage of labour and an insatiable demand for more production, the rôles are reversed. It is then imports that are primarily wanted—as raw materials and as additional supplies of finished goods—and exports come to be regarded as an unfortunate necessity—unfortunate as they absorb some of the scanty labour supply, but necessary since imports must be paid for. A peace economy, in short, is chiefly interested in selling to foreign countries, a war economy in buying from them.

Now, if exchange clearing is looked at as a means of selling goods, it is not very attractive, since payment can only be taken in other goods and, what may be even more inconvenient, in the goods of one particular country. But regarded as a means of buying, exchange clearing is excellent, especially for a country that has no reserves of foreign currencies. Goods can be bought, and they do not have to be paid for until there are some goods that can be sent in exchange. Germany tended, from the start, to increase her purchases from countries with which she had exchange clearing, so as to economize her supplies of foreign exchange for articles that could not be bought from the clearing countries. What is

more, she ran into debt; she bought more from the clearing countries than they were either prepared or able to buy from her, so that large balances accrued to their credit in Berlin, which they could liquidate only by taking German goods—that is to say, the goods that Germany had to spare.

The next phase was the use of exchange clearings by Germany to extend her political influence and economic dominance over the countries of south-eastern Europe. She bought large quantities of their crops and forced these countries in return to take large consignments of German manufactures at high prices. These German goods came to be an important part of the total supply of manufactured goods in these countries, and their high prices, combined with the good prices paid by the Germans for the crops they bought, caused the internal price-levels of these countries to rise. This, in its turn, tended to cut them off from other countries, for a high internal price-level made it difficult for them to compete in world markets. So they had to do still more of their trade with Germany. Why, it may be asked, were these countries prepared to continue with a process that made them, year by year, more dependent on a country they feared? The answer is that for the bulk of their agricultural produce, Germany was either the only buyer or else offered a price above the world market (the German consumer could be made to pay the difference). In all these countries the agricultural crops are the foundation of the national wealth, and it was virtually impossible for them to reject the attractive German offer. The counterpart was, of course, dependence on German manufactures, which they had to take, even though other countries' goods were, in some cases, better and cheaper.

By using her buying power, Germany placed herself

in an almost dominating position. There was virtually no end to the tricks that were played with the mechanism of the exchange clearing. For example, German firms sold bicycles to Roumanian peasants on hire-purchase terms, giving them years to pay. As soon as the bicycles crossed the frontier, an equivalent amount of Roumanian wheat or oil was released. But the German firms were, of course, paid at once out of the clearing account in Berlin, while the people who actually extended the long-term credit were the Roumanian exporters who were compelled to wait until the payments for the bicycles were paid into the clearing account in Budapest. Thus the Germans discovered a new way of paying for the wheat or oil they wanted, and forced Roumania to find the necessary credit.

A country's attitude to the rate of exchange between its currency and another also tends to change when it passes from a peace economy to a war economy. The normal tendency in recent years has been for countries to seek a low value for their currency, or at least to avoid over-valuation, in order not to hamper their exports. The fact that a low value makes imports expensive is an advantage rather than a defect. But as soon as a country becomes more concerned to buy than to sell, it needs a high value for its currency so that it can buy cheaply. Usually too high a value would defeat its own ends, since the country's exports would then suffer by being too expensive. But under a régime of exchange clearing this is not so. Germany pushes up the value of the Reichsmark relatively to, say, the Roumanian leu; that enables her to quote a very attractive price, in lei, for wheat, without it costing her too much in Reichsmarks; and if her goods become very expensive in Roumania, what does that matter? The Roumanians are forced to take them at any price,

since it is only by doing so that they can get any return at all for their sales of wheat. Indeed, the dearer German goods are the better for Germany, since fewer of them will then be needed to pay for a ton of wheat. Contrast this with the position in the Roumanian market of Great Britain, whose currency was, at least until the war, consistently under-valued. Roumania could not sell her wheat to us, because the price in the world market, converted from sterling into lei at the low rate for sterling, was far below the price that could be obtained by selling to Germany. And though our goods were cheap, Roumania could not buy them because, since she could not sell to us, she had no pounds with which to pay for them. It was only by raising the value of the pound relatively to the leu, or alternatively by paying more than the world price for our purchases from Roumania, that we could have secured a fair share of Roumanian trade.

Until exchange restrictions were imposed in Great Britain with exchange clearings in their train, the difficulty was that the value of sterling could hardly be raised in Roumania without its being raised elsewhere. With free markets, it is impossible to have a high value in one place and a low value in another for the same currency. This was the great advantage that the Germans derived from their controlled system. It has already been pointed out that their many different varieties of bargain-counter marks enabled them to suit the exchange rate to the conditions of each particular commodity. Exchange clearings enabled them to have different values of marks for different countries. Where their buying power put them in a strong bargaining position, the value of the mark could be high, while at the same time they could assist their exporters in more competitive markets by keeping its value low.

THE MERITS OF EXCHANGE CONTROL

What general opinion can we express on the merits of exchange control? Clearly, any judgment will have to particularize. Thus, Intervention can be given a clean bill of health. We reached the conclusion on page 287 that it is difficult to give a currency a permanently distorted value by means of Intervention. The one object that can be permanently pursued by means of Intervention is that of removing temporary fluctuations from the foreign exchange market. This is a wholly laudable object; indeed, it is a necessary part of the compromise between permanent stability and excessive instability which, as we shall see later, is probably the basis on which some future international currency system will be built.

Exchange Restriction, on the other hand, cannot be given such a general blessing. Restrictions are imposed for one of three reasons. The *first* is to prevent an international movement of capital. If this is merely an attempt by a country to default on its debts and use the resources thus set free for the purchase of munitions, it is, of course, to be condemned without reserve. It would be a pity also if countries used exchange control as a means of preventing their citizens from investing their capital in other countries, for, as we shall see in Chapter X., such investment is a necessary and natural part of a healthy economic system. But there may nevertheless be occasions when some control of capital movements may be quite legitimate or at least unavoidable. Stampedes of capital such as took place in Central Europe in 1931 would wreck any monetary system if they were permitted (though the soundest way of preventing them would be for countries to refrain from

unwise borrowing). France has suffered a great deal in recent years from the tendency of her capitalists to send their money out of the country whenever anything was done by the French Government that displeased them. There is universal agreement that the frantic movements of 'hot money' from capital to capital do nothing but harm; exchange restriction presents a method of stopping them. Or, as a final example, the world may be faced after the present war with the insoluble problem of finding some tenable relationship between the European currencies and the dollar. The dollar is at any time a strong currency. The United States is so nearly self-sufficient that she needs to buy very little from other countries, and the size and capital equipment of her manufacturing industry make her goods extremely attractive to the rest of the world. This strength will be increased by the repercussions of a war in which she stays in the favourable position of a neutral. If, in addition, there is a strong and continuing tendency for European capital to flow to America for safety or profit, it may be quite impossible for the European nations to earn a supply of dollars sufficient to meet the demand for them. It may be necessary to prohibit, or at least to ration, the flow of capital across the Atlantic.

These examples show that it would be foolish to condemn the restriction of the full freedom of the exchange market for the purpose of imposing some control over capital movements. This conclusion must, however, be made subject to three conditions. The first is that no attempt is made to stifle the international movement of capital completely. The second is that exchange control for reasons of capital does not become a screen behind which a distorted value of the currency of the controlling country is maintained; this should not be difficult to secure if the restrictions are confined

to transactions that are clearly of a capital character. But thirdly, we have hardly yet enough evidence to enable us to say with complete conviction that it is possible to control and limit some sorts of transactions without controlling and restricting others. Some countries have found that they are driven on to ever more and more comprehensive and severe restrictions; but they are mainly countries which have been trying to maintain over-valued currencies. The two countries which have tried to control capital movements without attempting to over-value their currencies—Denmark and pre-Nazi Austria—had a fair measure of success. They provide, if not proof, then at least hope, that this sort of exchange control, which might be very beneficial, could be made to work.

The *second* reason for which countries impose exchange restriction has already been mentioned in discussing the first reason—it is the desire to keep the currency at an over-valued level. Generally, this is possible only at the cost of more and more restriction, which throttles international trade, or else by means of some elaborate subterfuge. The desire to maintain an over-valued level usually arises out of popular fear of inflation, and governments have at times reassured their publics by quoting a high 'official' rate for their currency, which is the only rate printed in the newspapers but at which no business is done, while the bulk of trade is carried on under clearing or compensation agreements at lower rates, or through the 'black bourse.' As a means of slowly accustoming the public to an unwelcome but necessary depreciation in the currency as was done in Austria, this form of exchange restriction has something to be said for it. As a permanent device, it is clearly obnoxious.

Thirdly, exchange restriction, with the full panoply

of its complicated offspring, may be used, as by the Nazis, as a weapon of the totalitarian state, to drill its citizens, to out-bargain foreigners, and to feed the war economy. It is to end this sort of thing that Britain and her allies, at the time these lines are written, have taken up arms, and no more need be said by way of general judgment. Some difficulty may, however, be felt in drawing the exact line between what it is legitimate for a country to do in defence of its currency and what constitutes economic aggression, just as there is difficulty in drawing an exact line in the political sphere between legitimate self-defence and aggression. The answer, however, must be the same in the economic as in the political sphere. First, there must be as precise a code of international economic law as can be contrived, and secondly, there must be an agreement among the democracies to use their economic power against any country that transgresses the rules. What those rules should be is too large a task for us to enter upon here, but it will be one of the duties of the peace conference.

Most of the devices that have been under discussion in this chapter have only been invented within the past decade. There is, however, one form of Intervention which is so old and has been so universally practised that it has frequently been regarded as the only normal and proper state for the foreign exchanges. This is none other than the gold standard, to which we turn in the next chapter.

CHAPTER IX

THE GOLD STANDARD

THE FUNCTIONS OF THE GOLD STANDARD

THE gold standard can best be regarded as a device for maintaining the stability of the exchange rates. Before describing it, it will be as well to inquire why stability of the exchange rates should be desired.

If the fluctuations of the exchange rates were always small, little inconvenience would be caused by them. But though in theory price levels in the different countries do not diverge so rapidly as to justify large movements of the exchanges, in practice a number of factors always ensure that the fluctuations are considerable. Seasonal factors force the value of a currency up at one time of the year, down at another. A sudden accidental excess of payments in one direction will depress the exchange value of one currency and raise that of another. Speculation, feeding on rumours or on more or less intelligent anticipation, will cause a flood of buying one month and a returning tide of selling the next. In these circumstances, international trade is subjected to considerable inconvenience.

It is not difficult to see that fluctuations in exchange rates impose a severe handicap on international trade. A sharp and unexpected movement of the exchange rate in the period between the beginning and end of a business transaction may wipe out the profit of the transaction and result in severe loss. Moreover, the

forward exchange market does not provide a complete means of overcoming this difficulty. When exchanges are fluctuating, traders necessarily do their work in an atmosphere of uncertainty and the volume of trade suffers in consequence. Nor is pure trade the hardest hit, for it can get some assistance from the forward exchange market, and in any case the loss on one contract may be recouped on another. A large part in the smooth running of international finance is played, as we shall shortly see, by loans from one country to another. Now, if the contracts for such loans are made in the currency of the lender's country, the debtor never knows how much, in his own currency, he has contracted to pay each year in interest, or how heavy will be his burden of debt when the time comes to repay it. And if the contract is made in the borrower's currency, the lender is similarly in the dark as to the amount he will receive in interest and eventual repayment. Since in all loans it is the lender who usually has the whip hand, loans are generally floated in the lender's currency, but this imposes considerable handicaps upon the borrower, and necessarily leads to a reduction in the scale and number of international loans.

It will, therefore, easily be seen that fluctuating exchange rates impose considerable handicaps both upon international trade and finance, even in normal times. In abnormal times, when currencies are subject to the widest speculative fluctuations, and when, perhaps, governments are attempting artificially to depreciate the values of their own currencies in the hope that this will provide a stimulus for their export trades, the inconveniences reach their maximum. If stability could be assured, without bringing greater disadvantages in its train, it would seem to be worth having.

It does not, however, necessarily follow that stability

of the exchanges is the thing to be aimed at, for it may be, as we shall see, that it has disadvantages for purely domestic trade at least as great as its advantages for international trade. It would be a mistake to think that the gold standard was adopted because, after mature consideration of the advantages and disadvantages of stability of the exchanges, the advantages were decided to be larger than the disadvantages. The gold standard is sometimes defended nowadays by such a weighing of the pros and cons of exchange stability. But it was certainly not invented for this, or any other purpose. On the contrary, it grew naturally out of the historical development of money. Currencies originally consisted of metal coins, and in the course of time gold came to be the dominant monetary metal. Now, if each of two currencies consists of actual gold coins, it is only natural that the value of the one currency should be stable in terms of the other; there is no room for fluctuation in the relative value of 25 grains of gold and 100 grains of gold. Modern paper currencies developed gradually out of the gold coinage. The first step was to allow a certain proportion of notes, backed by and convertible into gold, alongside the gold coins. Banknotes were, in their origin, necessarily convertible into gold, for they were mere banker's IOU's, and unless they had been freely redeemable into gold there would not have been sufficient confidence in them for them to circulate as money. Similarly in the next stage of monetary development, the evolution of bank deposits and cheques—they too in their origin had to be redeemable in gold in order to command confidence. Banknotes and bank deposits were originally a very small part of the total of money, most of which still consisted of actual gold coin. But even when they grew to be the largest part of the total of money, their convertibility into gold was for long main-

tained. And indeed, so long as gold and paper money circulate together, they must be freely interchangeable with each other, since it is impossible to have two sets of money of different values circulating together. Since the last gold coins disappeared during the last war, it is no longer *necessary* for banknotes to be redeemable in gold. But it is as possible as ever it was. Nowadays, virtually every currency in the world consists (apart from subsidiary copper, silver, and nickel coins) entirely of paper. When this paper money is made by law freely interchangeable with gold at a fixed ratio, the currency is on the gold standard. But this device of a paper currency convertible at fixed rates into gold, far from being a monetary invention, is the result of centuries of evolution.

These different stages in the evolution of the gold standard are frequently given distinguishing titles. A currency system in which gold coins either form the whole circulation or else circulate equally with notes is known as the 'full gold standard.' When gold coins do not circulate, but the Central Bank is nevertheless under legal obligation to buy and sell gold in exchange for currency at a fixed price and in unlimited amounts (sometimes with a minimum amount fixed but never a maximum) it is known as the 'gold bullion standard,' as the currency is then convertible not into gold coin but into gold bullion. A third form is the 'gold exchange standard,' under which the legal obligation resting upon the Central Bank is to redeem the currency not in gold itself but in some other currency which is itself convertible into gold. The gold exchange standard is usually adopted by a small or poor country which designates as the currency in which it will redeem its own notes at a fixed rate the currency of one of the large gold standard countries. But whatever form the gold standard may take, its essential characteristic is

that the currency is, either directly or at one remove, either in volume or in value, linked to gold.

The fact that it was gold, and not silver or platinum, which came to serve as the international monetary metal is to be explained partly by its technical excellence as a monetary metal, but mainly by historical accident. There is a popular idea that a currency which is on the gold standard is in some mysterious way more valuable than one that is not on the gold standard. In the modern world there is no basis for any such idea. The only value of a currency is what it will buy, and that depends, as former chapters have explained at length, upon a variety of factors which have little or nothing to do with whether or not it has a fixed gold value. The value of a currency depends in the long run on the confidence people repose in it ; and that confidence may be as great when the currency is inconvertible paper as when it is hard gold coin.

The modern gold standard serves two functions which can be clearly distinguished. In the first place it is a method of controlling the volume of the currency. Currency laws frequently stipulate that notes can only be issued if there is a certain backing of gold held in reserve against them. Thus, in Great Britain, on the eve of the war in 1939, the Bank of England could issue £400,000,000 of notes without any gold,[1] but if it wanted to issue more than that amount it had to have one pound's worth of gold in its vaults for every pound of notes issued in excess of £400,000,000. In the United States, the Federal Reserve Banks must have gold or gold certificates[2] to the value of at least 40 per cent.

[1] The amount of this so-called 'fiduciary issue' could be altered at the discretion of the Treasury.

[2] *Gold certificates are a special form of note issued by the United States* Treasury and backed 100 per cent. by gold.

of their total note issues. Indeed the American law, with a more accurate appreciation of the nature of a modern monetary system than the British Bank Act, also specifies that a reserve of 35 per cent.[1] must be held against the deposit liabilities of the Federal Reserve Banks (*i.e.* the cash reserves of the Member Banks). Other countries have different varieties of provision, the percentage-reserve system being more prevalent than the British fixed-fiduciary-issue system. But whatever the exact provision, it clearly limits the ability of the Central Bank to issue currency. The Central Bank may choose to issue *less* notes than its gold holdings would allow—and in fact all Central Banks do keep some of their gold holdings as a reserve for emergencies. But clearly it cannot, without breaking the law, issue *more* notes than its gold holdings would allow. This is, in fact, a rudimentary way of trying to ensure that the volume of the currency shall not be liable to sudden and arbitrary increase.

The second function of the gold standard is to preserve the stability of exchange rates. A country which is on the gold standard imposes [2] upon its monetary authorities (which usually means the Central Bank) the obligation of buying all gold offered to it and of selling all gold demanded from it in unlimited quantities at fixed prices. Thus, before 1914, and again from 1925 to 1931, the Bank of England was under legal obligation to buy gold at £3 17s. 9d. per standard ounce and to sell it at £3 17s. 10½d. per standard ounce. From 1925 to 1931 there was the limitation that the Bank need not either buy or sell quantities of *less* than about

[1] Either in gold or in currency, against which in turn a gold reserve of 40 per cent. is kept.

[2] The present tense is used in what follows, though there is no country which in this sense is fully on the gold standard.

400 ounces, but neither then nor before 1914 was there any *maximum* limit on the demands that could be made on the Bank. The presence in the market of an unlimited buyer or seller at fixed prices effectively fixes the market price. So long as these legal provisions were in force, the price of gold in the London bullion market could not vary except within the narrow range of 1½d. per standard ounce. It was to all intents and purposes fixed. Other gold standard countries had similar arrangements, though, of course, with different fixed ratios between an ounce of gold and a unit of the currency. The bearing of this on stability of the exchange rates is simple. According to Euclid two things which are both equal to the same thing are equal to each other; if £1 and $4.86 are both worth 113 grains of fine gold it follows that they must be equal to each other. Not exactly, however, for £1 is worth 113 grains of gold in London and $4.86 is worth the same amount of gold in New York. New York and London being separated by time and space, both of which take money to overcome, the values of £1 and $4.86 can diverge from equality by the cost of shipping the equivalent amount of gold across the Atlantic Ocean. These costs are threefold: freight, insurance, and loss of interest for the time taken. But they are nevertheless very small; in 1925 it was calculated that the cost of shipping one pound's worth of gold across the Atlantic was about 1¾ American cents. Consequently, the 'mint parity' being $4.86⅔=£1, whenever the exchange rate in the market fell to about $4.849 it became cheaper to buy gold from the Bank of England, ship it to New York, and there sell it to the Federal Reserve Bank for dollars rather than to buy the dollars in the exchange market. Similarly, if the rate rose to about $4.885 it would be cheaper to import gold than to buy pounds. These

rates of exchange at which gold movements become profitable are known as the 'gold export point' and the 'gold import point' respectively. The rate of exchange is free to move between them, but as the difference between the two gold points is only a matter of less than 1 per cent. of the parity rate, the exchange rate is stable for all the intents and purposes of ordinary business men who are not concerned with the intricacies of the foreign exchange market.

It is of interest to observe how the stability thus maintained can be reconciled with the principle laid down in Chapter VII. that instability of exchange rates, depending as they do on the varying totals of demand for and supply of currencies in exchange for each other, is the natural state of affairs. What happens under the gold standard when the rate reaches $4.849 is that any demand for dollars which cannot be satisfied in the exchange market at that rate is diverted to the Bank of England and used to buy gold. The excess demand is thus drained off and satisfied in a roundabout way, leaving demand and supply *in the market* equal to one another. From the technical point of view, therefore, the gold standard is a device for ensuring that the demand for and supply of a currency *in the exchange market* shall always be equal to each other—or, more accurately, shall not diverge to such an extent as to cause the exchange rate to move by more than about 1 per cent.[1] It is, in short, a special form of pegging.

The two functions of the gold standard are logically quite distinct. The first, aiming at control of the volume of the note issue, is obviously concerned with the internal value of the currency ; we may, therefore, call it the

[1] The margin between the gold points is smaller when the two centres are nearer together than New York and London. Thus between London and Paris it was calculated in 1929 to be about ½ to 1 per cent.

Domestic Gold Standard. The second, aiming at the stability of the external value of the currency, we can call the International Gold Standard. The cardinal point in the Domestic Gold Standard is clearly the proportion of *volume* enforced by the law between the gold reserve and the currency. The essence of the International Gold Standard is the convertibility of the currency into gold—that is, the fixed proportion of *value* between a unit of gold and a unit of the currency. A country can preserve the one function while abandoning the other. For example, when the pound sterling went off the gold standard (*i.e.* the International Gold Standard) in 1931, the provisions of the Bank Act providing for convertibility were suspended and the Bank of England was no longer under obligation to sell gold at a fixed price or indeed at any price at all. But the provision of the Currency and Bank Notes Act by which the Bank of England must regulate the size of its note issue by the size of its gold reserve remained in effect (the gold reserve, indeed, continuing until 1939 to be valued for this purpose at the old fixed price of gold, although this price no longer had the slightest validity). Conversely, it would be fully possible to have a currency convertible into gold, and consequently on the International Gold Standard, but without any legal tie between the volume of the currency and the volume of gold in the country. Such was the position of France before 1914. The two functions, indeed, are not only separable and distinct, they frequently come into conflict. If a gold reserve has to be kept as a backing for the currency it is *ex hypothesi* not available for export, and vice versa. In consequence, every country maintaining both the Domestic and the International Standards virtually has to have two gold reserves, one for keeping and one for use.

Of the two, the International Standard is incomparably the more important. The Domestic Standard is, at best, only a clumsy way of doing what could be done much better by other methods, if indeed it has to be done at all.[1] The International Gold Standard, on the other hand, is the only means that has ever been successful over a long period in achieving exchange stability. The Domestic Gold Standard consequently need not detain us long, while with the International Gold Standard we shall be more or less directly concerned for the remainder of this book.

THE DOMESTIC GOLD STANDARD

The connection between the amount of gold in a country's reserves and the volume of its currency is of historical origin ; it is the remaining trace of the origins of paper money and bank credit as mere substitutes for solid coin. But its obstinate retention is a sign of the persistent superstition that money to be 'sound' must have a foundation of gold, even if that foundation is locked away in a vault and inaccessible to the public. In Great Britain at the present day, for example, there is no means by which the holder of a pound note can convert his piece of paper into gold ; its value depends, in reality, entirely upon the fact that he and his fellow citizens accept it as money. Nevertheless the inheritance of a millennium of superstitious awe of gold is still so strong that the man in the street, if interrogated, would probably reply that his pound notes were of value because they are 'backed by the gold of the Bank of England.' The old superstition is dying, however. On the outbreak of war in 1939, virtually all the gold reserve in the Bank of England was transferred to the Exchange Equalization Account, where it is available for external

[1] See pages 185–6.

use. At present (Summer 1940) each pound note is backed by less than $\frac{1}{10}$d. worth of gold—but confidence in the currency is unimpaired.

In the modern world the only rational purpose of laws establishing minimum reserves of gold against currency is to prevent any undue expansion of the currency. But there are many much less wasteful methods of accomplishing this purpose. It might, for example, be decreed, as was the case in France before 1914, that the note issue should not exceed a certain amount, irrespective of how much gold was held against it. The most sensible way would be to impose no limit at all, but to trust to the good sense of the monetary authorities. An increase in the currency is one of the later phenomena of an inflation ; to hope to prevent inflation by limiting the expansion of the currency is like hoping to stop a motor car that is running downhill by turning off the petrol. If the authorities cannot be trusted not to start an inflation, it will do no good, but merely precipitate a banking crisis, to limit the supply of currency.

Not only is a minimum gold reserve a wasteful way of regulating the volume of the currency, it is also a most capricious one. For it does not stabilize the volume of the currency, it merely stabilizes the relation between the volume of gold and the volume of the currency, and if the volume of gold is itself fluctuating, the Domestic Gold Standard does not stabilize the volume of the currency but forces it to fluctuate.

There is a certain amount of justification for the view that the volume of gold available to serve as reserves for all the currencies of the world taken together will not fluctuate wildly. Gold is an almost indestructible material, and the output of the mines in any short period can only be a very small fraction of the existing stock. Thus, if the existing stock is about twenty times the

annual production (approximately the present pro-portion), a doubling of annual production would only make a difference of 5 per cent. to the total stock. But this is not quite as reassuring as it seems, for it applies only to the total stock of gold *in all uses*, and it is always possible for the *monetary* stock of gold to be affected by additions to or releases from the hoards of gold kept by scared capitalists in the West or by potentates and peasants in the East. Furthermore, an expanding progressive world needs an expanding supply of currency and if the annual percentage increment to the gold stock does not equal the annual percentage increase in the demand for currency there will tend to be either an excess or a deficiency of currency, and hence a tendency to rising or falling prices. This can be very clearly seen from the monetary history of the nineteenth century as was pointed out in Chapter IV.[1] Between 1820, when the currency disturbances incidental to the Napoleonic Wars were coming to an end, and 1850 the increase in the stock of gold was failing to keep up with the expansion of production. As a result, though there were years when prices rose and other years when they fell, the average tendency was downwards. From 1850 however, the discoveries of gold in California and Australia caused an increase in the supply and prices started to rise. From 1873 the production of gold once more failed to keep up, especially as a number of countries, notably the new German Empire, were establishing a gold standard for the first time and hence increasing the competition for the limited supply of new gold. This was perhaps the dominant cause of the long depression of the 'seventies and 'eighties. Finally the dis-covery of the vast Rand goldfield in South Africa in 1896 and the coincidental development of a more efficient

[1] Pages 122–3.

method of extracting gold turned the curve of prices once more upward.[1]

There is thus no warrant for believing that to tie the currency to gold will be to secure it from arbitrary fluctuations in volume. In 1928–30, before the depression had shattered the post-war gold standard, there was good reason to believe that a shortage of gold impended. The output of the existing goldfields could be closely predicted, while the scope for the discovery of a new field of any magnitude was so restricted that, in the opinion of geologists, it could be almost disregarded. It seemed, therefore, clear that the monetary stock of gold would not increase, in the 'thirties and 'forties of this century, fast enough to keep pace with the expansion of industry and commerce, with the result that there would be a tendency to falling prices and depression.

Events, however, turned out very differently. Starting in 1931, the world's currencies were depreciated relatively to gold. The pound sterling, for example, from being worth a shade less than a quarter of an ounce of fine gold fell until it is now worth less than one-eighth of an ounce. The dollar is now worth only three-fifths of its previous weight in gold. The French

[1] These periods are all described in detail in *An Introduction to the Study of Prices*, by Sir Walter T. Layton and Geoffrey Crowther. It is perhaps worth while recalling the fact that the supply of money is not, even in the long period, the *cause* of the price-level being what it is, but merely sets limits to its rise. An inflationary rise of prices will tend to continue until checked by something, and a shortage of credit—due to a shortage of currency (*i.e.* the Member Banks' cash reserves getting low), which is itself due to a shortage of gold (*i.e.* the Central Bank's reserve ratio approaching the legal minimum)—is frequently the something that serves as a check. The function of the supply of money is thus akin to that of the governor on a gramophone motor: it does not *cause* the speed to be what it is, it merely prevents it being any greater. If the spring runs down, the speed will be less, governor or no governor. Similarly, a supply of money limited by the supply of gold impedes prices from rising above a certain point; it cannot prevent their falling below it.

franc has fallen still further. If the pound is worth less gold, it follows that an ounce of gold is worth more pounds ; the price of gold in London has, in fact, risen from 85s. to 168s. a fine ounce. This means that the world's gold reserves, even if they had remained exactly the same in *weight*, would have increased very considerably in *value*. When in 1928–30 a shortage of gold was predicted, what was meant was a shortage of gold measured by its value, so that the rise in the price of gold would be enough by itself to turn a threatening shortage into an actual surfeit. In fact, however, the rise in price stimulated an increase in production. Miners' wages and the other costs of the goldmining companies are fixed in money, not in gold ; they did not go up in proportion to the rise in the price of gold. Goldmining accordingly became a very profitable business ; it became possible to mine low-grade ores which had not previously been remunerative. The world's production of gold increased from 19½ million ounces in 1929 to 39 million ounces in 1939 ; moreover, the 1929 production at the price of 85s. an ounce was worth £83 millions, and in 1939 production at 168s. an ounce was worth £328 millions. On top of the increase in the money value of the existing stock of gold, and in both the weight and the value of the current production, there has been an increase in the monetary stock of gold through sales by persons who were tempted by the high price to sell their gold ornaments or hoards. Thus, within a decade the danger of a shortage of gold has been changed into the actuality of a large surplus.

This sudden reversal is enough in itself to demonstrate that a mere adherence to laws which prescribe a relationship between the volume of currency and the volume of gold is no guarantee of stability. Many plans have been put forward from time to time to ensure a

greater stability in the purchasing power of gold and therefore of currencies based on gold. All these plans involve some interference with the conditions of demand for or supply of gold. So long as a certain quantity of gold has to be kept against the currency the *demand* for gold is part of the demand for currency, which in turn is part of the demand for money; and the demand for money is, of course, the amount of 'money work' there is to be done: the volume of transactions to be performed (according to one variant of the equation of exchange[1]) or the proportion of their resources that people choose to hold in the form of money (according to the other[2]). The *supply* of gold is, of course, the existing stock, added to by each year's new production. If demand is increasing more rapidly than supply (*i.e.* if the economic progress of the world is more rapid than the increase in the stock of gold) the value of gold will rise, and vice versa. So long as the *price* of gold is fixed and cannot rise, the only way in which the rise in its *value* can show itself is by a fall in the price of everything else, *i.e.* by a declining price-level. The problem can thus be tackled in either of two ways. The first would be to devise a way by which the supply of gold could be accommodated to variations in the demand so that its value would not fluctuate. Or secondly, if the value of gold cannot be prevented from fluctuating, the changes could be allowed to express themselves, not by movements in the price of everything except gold, but by changes in the price of gold itself.

Various schemes have been formulated along each of these lines of attack. The first is obviously an international matter, as it is clearly beyond the power of any one country to determine the supply of gold. Even an international consortium to take over the world's gold mines and run them, irrespective of profits,

[1] See page 120. [2] See page 132.

so as to produce just the quantity of gold required, would be powerless in the face of a physical shortage of auriferous ore. This line of thought usually assumes the form of regulating the supply not of actual physical gold but of something that would take its place. For example, it has been proposed that the gold stocks of the world's Central Banks should be transferred to the ownership of the Bank for International Settlements and that the B.I.S. should in return issue 'gold certificates,' which would be held by the Central Banks as their reserves and which would be transferred from one Central Bank to another in lieu of movements of gold. It would then be possible for the B.I.S. to issue rather more, or rather fewer, gold certificates than it had gold, and thus ensure an even supply of gold for monetary purposes. This is, of course, an ambitious and, at the moment, impracticable scheme. A modification of it which has been suggested is that the B.I.S. (or some other international authority) should issue a limited number of 'gold certificates' in addition to the existing stocks and without asking any Central Bank to part with possession or ownership of any gold it has now. This, provided it could be accepted by all concerned, would solve the difficulty of a shortage of gold, but it would be powerless to affect a surfeit of gold, which appears to be the danger of the immediate future.

The other method of tackling the problem would be to provide for a variable *price* of gold to match its variable *value*. This again could be done internationally. But the great merit of this approach to the problem is that it can also be accomplished by each nation separately. The best known scheme of this sort is the so-called 'commodity dollar' plan originally proposed by Professor Irving Fisher before the war, and adopted, for a few months in the autumn of 1933, by the American

Government as its official policy. The plan postulates that, whenever the general price-level falls by 1 per cent. that is equivalent to a rise of 1 per cent. in the *value* of gold. It can consequently be corrected by increasing the *price* of gold by 1 per cent. The rise in the *value* of gold will thus be enabled to express itself in an increase in its own price rather than by dragging every other price down.

This theory has the attractive merits of simplicity and mathematical precision. Unfortunately there is no reason to believe that it will work. The only way in which an increase in the price of gold can take effect is by increasing the value of the Central Bank's gold reserve and thus enabling it to issue more currency. But in the short period, the movement of prices has little or nothing to do with the supply of money. In a period of depression, such as 1930–33, prices may fall though the supply of money is increasing. It is true that a fall of prices is the same thing as an increase in the value of gold, but that does not mean that the increase in the value of gold is the *cause* of the fall of prices. As we have seen in previous chapters, falling prices may be occasioned by complex developments in the nexus of saving and capital, with which the volume of the supply of money has little to do. This theoretical criticism is borne out by the experience of the United States, during the period when the 'commodity dollar' was being tried out.

Another proposal for stabilizing the value of gold—or, more accurately, for avoiding a shortage of gold—which has attracted support for decades past is bimetallism, or the use of silver as well as gold. Two hundred years ago, silver was the predominant monetary metal. The French words for money and silver are to this day identical. Gold became established as the sole standard first in Great Britain and then gradually in the course

of the nineteenth century in most of the other large countries. There have always been some who regretted the ousting of silver and advocated its reinstatement. The hard core of the ' Silver Party ' is composed of those who own silver mines and would naturally welcome anything which would increase the demand for silver and raise its price. But when the general price-level is falling and a case can be made out for the argument that the fall is due to a shortage of gold, the remonetization of silver appears to be a means of escaping from falling prices and the accompanying depression. Bimetallism thus appeals at such times to all those who have suffered most from the fall in prices—that is, pre-eminently the agricultural elements. These facts partly explain the recurrent strength of silver agitation in the United States. For, by an accident, the Western States, which have large political influence, are mainly agricultural but also contain silver mines. The association of the Western agrarians with bimetallism was most fully achieved in the Presidential campaign of 1896, at the end of the long depression of the 'eighties and 'nineties, when the Democratic candidate, William Jennings Bryan, based his whole campaign upon his eloquent, but somewhat vague, refusal to suffer Mankind to be ' crucified upon a cross of gold.'

The suggestion has rarely been that silver should replace gold entirely, but that it should take its place alongside gold as a second monetary metal. Currencies would be convertible into either gold or silver at fixed rates (the prices demanded by Bryan were $20.67 per ounce of gold and $1.29 per ounce of silver—that is a ratio of value of 16 to 1), and the minimum metallic reserve against the currency could consist of either gold or silver. The defect of this proposal is that it is impossible to fix for all time a definite ratio between the

values of two metals, each of which is subject to entirely different conditions of supply and demand. The fixed ratio is bound at any time to over-value one metal and under-value the other. If one country alone (for example, the United States) is trying the bimetallic solution, while others have no fixed price for silver, then silver in the United States, at its fixed price of $1.29 an ounce, will always be either cheaper or dearer than in the rest of the world. If it is cheaper, then the rest of the world will send gold to America in exchange for silver, and the American Government will lose all its silver. If it is dearer, then the world will sell all its silver to America and take gold in exchange, so that America has no gold. If bimetallism is adopted by the whole world it has a greater chance of succeeding, but even then the fixed link between the two metals will make it more profitable at any time to mine one rather than the other. Short of such a world-wide solution, bimetallism does not secure that the currency is based upon *both* gold *and* silver, but that it is based on *either* gold *or* silver, and there is no reason to believe that such an alternating basis would be any more stable than gold alone.[1]

The value of silver relatively to that of gold has

[1] To get round this difficulty, Marshall proposed a variant which he called 'symmetallism.' According to this proposal, the currency would not be backed by and convertible into gold *or* silver, at the option of either the public or the Central Bank, but into gold *and* silver, possibly combined together in a bar of amalgam. A price would be fixed for 1 ounce of gold plus, say, 10 ounces of silver and the Central Bank would be under the obligation to buy or sell this combination without limit, but it would not buy or sell either metal separately. Reserves would also be calculated in terms of the combination. This arrangement would allow the relative prices of gold and silver to vary freely, provided their combined prices were always the same. In this way it would be possible to utilize the combined supply of both metals as the base of the world's currencies. If a metallic base is essential and there is reason to anticipate a shortage of gold, symmetallism would probably be better than gold alone. But as is pointed out above, there may shortly be an excess of gold.

fallen very considerably since silver was demonetized, and at the end of 1932 the ratio of value was about 82 to 1 instead of Bryan's 16 to 1. In 1933 and 1934 measures were taken, chiefly by the United States, to increase the price of silver, and at the end of 1934 the ratio was approximately 70 to 1 ; later, however, it relapsed again, and at the outbreak of war in 1939 the ratio was about 96 to 1. These variations had very little effect upon most of the world, where silver is just another metal, but for one part of the world they were all-important. The currency of China was on a silver standard and the rate of exchange between Chinese currency and gold standard currencies consequently varied in the same way as the ratio of value between silver and gold. The Chinese currency was consequently steadily depreciated until 1933 and then violently appreciated. China suffered first under-valuation, then over-valuation of her currency. Neither condition makes for stable economic conditions, but over-valuation can be disastrous. The artificial depression in China after 1933 did far more harm there than the rise in the price of silver did good in the United States. In fact, the American attempt to rehabilitate silver as a monetary metal had the paradoxical effect of driving China off the silver standard and making her adopt a new base for her currency which, until 1939, was stabilized in terms of the pound sterling.

There are thus a number of proposals for securing a stable metallic basis for the Domestic Gold Standard—an international gold consortium, gold certificates issued by the B.I.S., the 'commodity dollar,' bimetallism, and symmetalism. But all these proposals suffer from the fundamental defects that they will not work when they are most needed to. They all rest on an acceptance of the Quantity Theory—on the belief that the trade cycle

is caused by fluctuations in the quantity of money and that the first principle of monetary wisdom is therefore to secure a stable supply of money. But as we have seen in earlier chapters, this is far too simple-minded. It is true that a depression may be brought on by a shortage of money ; but this is neither the only nor even the most frequent cause, and the maintenance of an unvarying quantity of money will not preserve a country from depression. Moreover, we have been speaking in the last few sentences of the quantity of *money*, and the various devices for modifying the Domestic Gold Standard—indeed, that standard itself—are concerned to regulate the quantity of *currency* only. A reduction in the quantity of currency may cause a reduction in the quantity of money, or it may not. The two can, on occasions, run divergent courses. Thus, if a severe depression accompanied by a fall in the total quantity of money of all kinds happens to coincide with a wave of distrust of the banks (as happened in the United States between 1930 and 1933) the public may choose to hold in currency a rising proportion of the falling total quantity of money, and the volume of currency in circulation may rise. To prevent it from doing so would do no good at all ; it would merely precipitate a still severer banking crisis. The quantity of currency in existence has, it is true, some influence on the level of prices and the state of trade. But it is much nearer the truth to say that the quantity of currency in circulation depends upon the volume of transactions which, at the prevailing level of prices and state of trade, the public chooses to accomplish in hard cash instead of by cheque. It is much more a consequence than a cause. It follows that any device whose sole effect is on the quantity of currency is likely to be of very little value in promoting general monetary and economic stability.

Is there, then, any argument for retaining the Domestic Gold Standard? It would be possible to find an argument in the relations between the Domestic Gold Standard and the International Gold Standard. As we shall see shortly, it is an essential part of the International Gold Standard that when gold is flowing out of a country that country's monetary authorities shall start a restriction of credit with the object of lowering prices, and that when gold is flowing in the opposite direction an expansion of credit shall be started. If when gold is withdrawn from the reserve and exported the currency has to be contracted, that is one way of ensuring that the correct consequences follow from the export of gold. In the old days, when currency was the largest part of the whole supply of money, and gold coin the predominant form of currency, this was a very good method, for a reduction of the volume of gold coin in circulation meant an almost equivalent reduction in the whole supply of money. But in a modern monetary system, this argument for gold suffers from the same defect that has just been pointed out—that it not only implicitly accepts the Quantity Theory but also assumes that fluctuations in the size of the gold reserve are followed exactly by fluctuations in the total supply of money. It would be foolish to keep the Domestic Gold Standard solely for the very haphazard assistance that it will give in this way to the International Gold Standard, even supposing that the latter is to be restored. Moreover, in another way, as has been already mentioned, the two standards get in each other's way. The fact that gold has to be retained as a reserve against the circulation reduces the amount that is available for export. This fact is often, however, ignored by the general public, who judge the external strength of a currency by the amount of gold that is tied up as a

domestic reserve. The knowledge that there must always be a certain amount of gold in the Central Bank's vaults is somehow thought to ensure that there will always be some available for the conversion of notes, just as the German Police President's ruling that there must always be two taxis on the rank was intended to ensure that there would always be taxis available for hiring off the rank—though the actual effect is of course the opposite.

This aura of security that still hangs about gold is, in fact, the only remaining sound or semi-sound argument left for the Domestic Gold Standard. In France and America there would probably be serious distrust in the national currencies if they were not known to be 'backed by gold.' In England, we already have a more rational approach. As has already been pointed out, the gold backing of the Bank of England's notes has been reduced virtually to nothing, and the whole gold reserve has been concentrated in the Exchange Equalization Account, where it is available for export but not as currency backing. The ordinary man is probably not yet aware that this has happened, but after a few years it will be accepted by the public that money does not need either to be gold or to be backed by gold in order to be good money. When that time comes, the Domestic Gold Standard will have died a natural death without its demise having done anybody harm, and gold will be left to its other task of regulating the international relationships of currencies.

THE INTERNATIONAL GOLD STANDARD

The Domestic Gold Standard is mainly concerned with the *volume* of money and with its influence upon the domestic price-level. The International Gold Standard

is concerned with the external *value* of the currency and with the problem of maintaining the stability of the foreign exchanges. It is perhaps worth while to repeat the point that the gold standard was never 'invented' to serve any conscious purpose. What we have called its Domestic functions arose quite naturally out of the distrust with which paper money was regarded in a world whose money was mainly of metal. If notes were to be allowed alongside gold, the greatest care had to be taken to see that they were merely substitutes for gold, that they were not issued in excessive quantities, and that the gold for redeeming them was always present. These precautions have anachronistically survived into an age when virtually all money is paper and gold coins are almost unknown, an age in which the man who converts his paper money into gold normally does so not because he prefers to have gold money but because he wishes to send the gold out of the country.

Similarly with the International functions of the gold standard. When gold coins provided the overwhelming part of the money supplies of the country there was no room for more than minute variations in the exchange rate between two gold currencies—provided always that both were kept at full weight and were not subject to clipping, sweating, or to loss of weight through excessive wear and tear. As notes began to form part of the circulation their ready convertibility into gold and their comparatively small amount prevented the previous automatic exchange stability from being disturbed. Later on, however, when bank credit came to be an important part of the money supply, the position began to be a little more complex. It was true that so long as bank deposits were freely convertible into gold at fixed rates the rate of exchange between a sterling bank

deposit in London and a dollar bank deposit in New York could not vary by more than the small margin of the gold points. But the system was no longer entirely automatic or foolproof, for the problem of convertibility had been injected into it. When a country's money consists predominantly of gold there is no question of its being convertible into gold; it is gold already. But when a country's money comes to consist of paper, and of that even less concrete substance, bank credit, its convertibility into gold is neither automatic nor axiomatic. The various devices which we shall shortly have to discuss have to be developed in order to ensure the maintenance of convertibility.

But the process of development is a gradual one, in which various measures have to be adopted to maintain that stability of the exchanges which at the beginning seems so natural as hardly to be questioned. There was no stage in the historical development of the gold standard, as it existed before 1914, at which a conscious decision was made to aim at stability of the exchanges. On the contrary, until the outbreak of the last war, the advisability of stable exchange rates was never questioned. Stability had been the normal state for more than a century, and of the known cases of instability every one was associated with war, revolution, or financial calamity.[1] The realization that there may perhaps be good reasons for eschewing exchange stability is almost entirely a growth of the last twenty years.

The method by which exchange stability is maintained has already been explained. Any demand for foreign currencies which cannot be satisfied by a direct exchange in the foreign exchange market at a rate

[1] Except, of course, for the instability of the rates of exchange between gold currencies and silver currencies, which could be represented as the divergences between two alternative methods of achieving stability.

within about half of 1 per cent. on either side of the 'mint parity' is shunted out of the foreign exchange market into the gold market. In this way, the demand for any currency in the foreign exchange market is kept equal to the supply in that market. But this mechanism depends entirely upon the fact that a demand for foreign currencies, when shunted into the gold market, can rely upon securing gold in unlimited quantities at a fixed price. If there were not the absolute certainty of this, the people who want foreign currencies would refuse to be diverted into the gold market. Unless they were sure that they could get their gold at the fixed price, which would enable them to get $4.85 for each pound, they would prefer to remain in the foreign exchange market and, by competing with the other persons who are offering pounds in exchange for dollars, force the rate of exchange down to $4.84 or even lower. Indeed, they need the assurance, not only that they can get 113 grains of gold for £1 in London, but also that they can get $4.86⅝ for 113 grains of gold in New York, after they have paid the costs of shipping. Without free convertibility of money into gold, and of gold into money, the gold standard cannot guarantee stability of exchange rates. The problem of the gold standard consequently boils down to the problem of maintaining convertibility.

Convertibility can only be maintained so long as the margin of unbalanced transactions, which has to be taken care of by movements of gold, is not large and persistent. Thus, in normal gold-standard times, if on any one day the number of dollars demanded in exchange for pounds within the gold standard range of $4.84 to $4.89 was larger than the number of dollars offered in exchange for pounds on that day, the Bank of England could easily take care of the excess by supply-

ing gold, since the gold withdrawn was very unlikely to exceed, say, a few hundred thousand pounds' worth. A similar demand could be repeated, and accommodated, on the next day, and even on every day for several weeks. But the Bank of England clearly could not allow it to continue indefinitely, since its gold reserve was not of infinite dimensions. The embarrassments of a continuing inflow of gold are not so apparent ; but they exist nevertheless. If the Bank had to buy gold day after day it would have to lock up more and more of its resources in gold, which earns no interest to help pay expenses, instead of in other forms of assets, such as Government securities. The Bank would naturally, after a certain point, object to being gorged with gold, and would try to bring the continued inflow of gold to a stop ; this, of course, would involve getting rid of the surplus demand for pounds which, at the fixed exchange rates, could not be satisfied out of the market supply of pounds. The disadvantages of a continuing inflow of gold are obviously less severe than those of a continuing outflow. There is only one instance on record of a country being so sated with gold that it has refused to take any more (the case of Sweden during the last war), while cases of countries refusing to give gold because of the approaching exhaustion of their reserves are very frequent. Nevertheless, in theory at least, the argument works both ways, and we may say that the only way of maintaining the free inter-convertibility of gold and money is to ensure that the demand for a currency in the foreign exchange market and the supply of it in that market do not get permanently out of balance. Gold movements can take up a temporary excess either of demand or of supply, but they cannot indefinitely accommodate a continuing excess.

The International Gold Standard must therefore

include a set of devices for ensuring that any disequilibrium between demand and supply is corrected. The conclusions of Chapter VII. may be recalled here. The demand for and supply of a currency depend in the long run on the relation between prices and costs in that currency's territory and prices and costs in the outside world. If a country's prices are relatively too high the demand for its currency will fall off and the supply of it increase. Under gold standard conditions, this would lead to an outflow of gold—not a sporadic one, but a continuous and cumulatively increasing one. Conversely, if a country's prices are low relatively to those of the outside world, there will be a continuous inflow of gold. The problem of maintaining convertibility is therefore one of taking steps to secure a fall of prices when gold is flowing out, and a rise of prices when gold is flowing in.

But any action that is taken to influence prices must necessarily take time to accomplish its purpose. In the interim period other steps must be adopted to stop the flow of gold. It will be recalled that in Chapter VII. a number of temporary factors acting upon the demand for and supply of a currency were discussed; these were, in the main, long-term capital movements, short-term capital movements, and speculation. In the case of a firmly established gold-standard currency, speculation can be largely ignored, for so long as the gold standard is maintained the exchange rate cannot fluctuate by more than 1 per cent., and there is consequently very little room for speculative profits. Capital movements remain. It was argued in Chapter VII. that their influence on a currency's value cannot be permanent, but it may be considerable in the short run, and we are in any case on the look-out for a factor which can be quickly mobilized to hold the position until the more

slowly moving but permanent change in price-levels can be effected.

When faced with an outflow of gold, then, the Central Bank must set in motion the causes which will bring about an eventual fall of prices, while at the same time attracting inward capital movements, or at least restricting outward capital movements. Both these objects will be achieved by an increase in Bank Rate and a restriction of credit. We found in Chapter VI. sufficient reasons for doubting whether the Central Bank's efforts to influence the price-level can ever be fully effective. But an increase in Bank Rate and a restriction of credit will undoubtedly *tend* to reduce prices. At the same time the rise in Bank Rate will affect the capital market. The rate of interest for short-term borrowing—demand loans by the banks, the rate of discount on bills of exchange and Treasury Bills, etc.—will be affected immediately. There will consequently be an immediate tendency for such funds as are normally invested at short-term to move towards the centre with the higher Bank Rate. If Bank Rate is raised in London, British banks and banking houses will recall the funds they have placed in New York, Paris, and other centres, while foreign banks will find London a more attractive centre for deposit. The flow of these funds to London will increase the demand for pounds and stop the export of gold. Before the last war, when a large part of the world's trade was financed by bills of exchange drawn upon London, an increase in the rate of interest prevailing in the London discount market would immediately lead to a reduction in the number of bills being drawn. The funds being remitted to London to meet old bills on maturity would therefore immediately begin to exceed the return flow of funds being remitted *from* London as the new bills were discounted in the market. Thus there

would be an immediate and automatic increase in the demand for pounds relatively to the supply.

An increase of Bank Rate will in time affect the rate of interest that can be obtained upon long-term securities. A rise of Bank Rate is almost always followed by a fall in the prices of British Government securities, thereby increasing the yield obtainable on them. We saw in Chapter VI. that there are many obstacles to the spread of an increase in the rate of interest into every corner of the market in capital. But that there is *some* tendency for all rates of interest to rise when Bank Rate is raised cannot be denied. When the rate of interest is rising in London, would-be foreign borrowers have to offer a higher rate if they are to secure their loan in London. They will naturally prefer to borrow elsewhere, or perhaps to defer the issue until later.

A rise in Bank Rate will thus tend to diminish the amount of money borrowed by foreigners. We can therefore say that an increase of Bank Rate, coupled with a restriction of credit, has three effects. The most immediate is to attract short-term banking funds (*i.e.* to increase the demand for the currency), the second in order of time is to diminish loans to foreigners (*i.e.* to diminish the supply of the currency coming into the foreign exchange market), while the slowest in action is a tendency of prices to fall, thereby both increasing the demand for the currency and diminishing its supply. Conversely, a reduction of Bank Rate and a relaxation of credit will lead to an outflow of short-term banking funds, an increase of foreign lending, and a rise of prices, each of which will have the effect of diminishing the demand for the currency relatively to the supply of it.

This in barest outline is the mechanism of the International Gold Standard. It would be more accurate to say that it *was* the mechanism of the International

Gold Standard before the war of 1914–18. It is unlikely that it ever worked in exactly the way that has been sketched. There were doubtless always countervailing factors at work which impeded its working in every particular. Indeed, it is easy to imagine occasions when changes in Bank Rate would fail to have the effects described above. Suppose, for instance, that the London market is regarded with suspicion, either because internal banking trouble is expected or because the suspension of the gold standard is believed to be imminent. In these circumstances no increase in Bank Rate will sufficiently stimulate the demand for sterling. Short-term funds will not be tempted by an extra 1 or 2 per cent. per annum, if a loss of 20 or 30 per cent. of the capital is in prospect. Nor will long-term capital be more favourably affected. Nobody will lend to a country which is believed to be on the verge of a crisis; on the contrary, both Englishmen and foreigners will tumble over each other to take their capital out of the country before the crash comes. Indeed, the raising of Bank Rate might be taken as the first harbinger of the storm to come and serve only to intensify the flight of capital.

The gold-standard mechanism must therefore be regarded as one for normal times, as working only if other things are equal. Nevertheless, it is a matter of historical fact that in the decades before the war it did work, pre-eminently in Great Britain, but also in those other countries which maintained an open market. In large part this was no doubt due to the fact that the pre-war epoch was a 'normal time,' international capital movements were neither very large nor very unsteady, and speculative movements of short-term funds were virtually unknown. Since 1914 there has hardly been a year when one of the major currencies of the world was not suspected of weakness; but in the days before

that war the major currencies were all above suspicion. London in those days was the undisputed financial capital of the world, and the volume of international payments passing through London must have been many times greater than through any other centre. Nevertheless the gold reserve of the Bank of England, upon which the whole fabric rested, was considerably smaller than the reserves of, say, France or the United States, and tiny compared to our present-day notions.[1] But the Bank found that the weapon of Bank Rate—not even (consciously) assisted by Open Market operations until the years immediately prior to the war—was sufficient to prevent this reserve from falling too low or rising too high.

Thus the Golden Rule of the Gold Standard is: expand credit when gold is coming in; contract credit when gold is going out. A Central Bank may ignore the rule for a time, if it is prepared to lose or to receive gold. Indeed, there are occasions when it would be foolish to follow the rule. The seasonal weakness of the pound in the autumn, for example, was frequently accompanied before the last war by an outflow of gold, which returned when the pound was seasonally strong in the spring. It would clearly be unnecessary to contract

[1] The gold holdings of the Bank of England in 1913 were about £35,000,000. About £10,000,000 of this had to be held as reserve for notes outstanding, leaving about £25,000,000 available for meeting demands for export of gold. On March 31, 1939, the gold reserves of the Bank of England and the Government together amounted to about £560,000,000. Of this amount, £210,000,000 was held as reserve against the note circulation and the remaining £350,000,000 was available for export. But this division was to some extent formal, as the Treasury had power to move gold from one category to the other, and at the outbreak of war virtually the whole was made available for export. The very large sums that had to be held for possible export even before the outbreak of war illustrate the enormous quantitative expansion of the foreign exchange market in the past quarter of a century.

credit every autumn and expand it every spring. But when the cause of the gold movement was neither seasonal nor temporary, the Central Bank could ignore the rule only at the expense of obeying it more drastically later.

In the earlier stages of modern monetary history, when actual gold coin was still the most important part of the money supply, the reaction of a gold movement upon the domestic credit position was almost automatic, for when gold was exported, the export itself was a contraction of the money supply. Even up to 1914 the connection was close enough for most people to consider it automatic. The surplus reserves of the Bank of England were so small that the Bank was forced, for the sake of its own solvency, to take immediate notice of any considerable draft made upon those reserves. Moreover, the reserve was subject to two distinct drains. If prices were rising in Great Britain, and rising faster than in other countries, there would be a tendency for gold to be exported. But there would also be a tendency for gold to be demanded of the Bank of England in order to increase the circulation of gold coin in the pockets of the public and the cash kept by the commercial banks in their tills. Conversely, when prices were falling in England faster than elsewhere, gold would come pouring in to the Bank of England, both from foreign countries and from the British public. In its own interests, therefore, the Bank could not allow any movement of gold to continue for more than a few weeks; it was forced to obey the Golden Rule in a way which, if not automatic, had all the appearance of automatism.

In the conditions of the world before 1914 the gold standard worked remarkably well. Stability of exchange rates was maintained with so little conscious effort that

it came to be regarded as natural. The economic structures of the various nations in those days were hardly any less divergent than they are to-day; the tempo of economic progress on the American prairies differed, as it does to-day, from that in the valleys of Lancashire; but by the device of the international gold standard all these divergent economies were kept within a monetary system and a price system which were so nearly homogeneous that they could truly be regarded as international. Each country's money seemed to be but a branch of the international money—gold; and each country's economy appeared to be but a sector of a truly interdependent world. It is the memory of this balance and harmony so successfully maintained between the different currencies of the world which lies at the root of the touching faith of many bankers and statesmen that restoration of the gold standard would automatically re-establish similar conditions of harmony in the present-day world.

But the gold standard is a jealous god. It will work—provided it is given exclusive devotion. The Central Bank must be prepared to work for stability of exchange rates and for nothing else; it must be prepared to expand credit when—but only when—it is receiving gold from abroad, and to contract credit when—but only when—it is losing gold for export. A contraction of credit, initiated because of an export of gold, may come at a time when Investment is exceeding Saving and contraction is welcome for purely internal reasons—or it may not. An expansion of credit may come when expansion is needed to stimulate Investment—or it may not. This does not mean that the Central Bank must necessarily follow a narrow rule of thumb, nor that it must pay attention to its gold reserve exclusively. But it does mean that the exclusive object of its endeavours

must be to maintain the convertibility of its currency, and that other aims can be pursued only so long as, and to the extent that, they do not clash with this. In practice this means that a Central Bank can lift its eyes from the guarding of its gold reserve and contemplate the further horizons of price stabilization or economic control only in two circumstances: if it has gold reserves so large that it need not worry, or if by a lucky coincidence the policy that is right for maintaining convertibility is also right for preserving price stability or for whatever other aim is in view.

At first sight it might appear that these lucky coincidences will be frequent. Contraction of credit will be undertaken when gold is flowing out; and gold will flow out when prices are too high. Expansion, conversely, will be undertaken when prices are too low. It might therefore appear that the Golden Rule would work in such a way as to stabilize prices as well as exchange rates. But this appearance is deceptive. A mere rise of prices will not lead to an outflow of gold and a contraction of credit; it must be a rise of prices *relative to prices in other countries.* Now, if the world price-level is falling and British prices are stable, there is a *relative* rise in British prices, and the Golden Rule will impose a credit contraction on Great Britain in order to ensure that British prices fall as rapidly as any others. Similarly, credit expansion may be undertaken not because British prices are falling, but because everybody else's prices are rising. The Golden Rule is not a device for maintaining the sobriety of the price-level, but for ensuring that each national price-level shall be as drunk as every other. And since every Central Bank is intent upon stability of the exchange rates and none of them is trying to counteract the periodical swings of inflation and deflation—over-Investment and under-Investment,

high prices and low prices—these swings are free to oscillate to their fullest extent. The gold standard does nothing to prevent these lurches, it only ensures that all shall lurch together. In the nineteenth century this defect was not large enough to outweigh the great advantages of automatic stability of the foreign exchanges, since the secular and world-wide movements of prices, though noticeable, were neither very large nor very sudden. But in our present-day world the instabilities of the monetary system are so great, and so painful in their effects, that each nation feels impelled to do what it can to limit them, even if the stability of the foreign exchanges has to go by the board in the process.

THE POST-WAR GOLD STANDARD : RESTORATION

The gold standard was shattered in the first weeks of the war in 1914. Every belligerent country in Europe, and many in other continents, withdrew the privilege of conversion within a few days of declaring war, and in the course of the struggle most of the neutrals followed suit. In Great Britain the legal obligation on the Bank of England to buy and sell gold at fixed prices was retained, but as both the melting of gold coin and the export of gold were prohibited there was no purpose in applying for conversion of notes into gold : convertibility was effectively suspended in fact if not in law. The immediate reason for suspending conversion was to preserve the gold reserve intact. During the course of the war, gold in circulation in every European belligerent country was withdrawn into the reserve of the Central Bank and notes issued in exchange, and many of the belligerents, Great Britain included, used part of the gold thus collected to pay for necessary imports from neutrals. It might therefore be said that the suspension of the gold

standard in 1914 was due to reasons of military or political strategy.

But even if the gold standard had not been suspended for strategical reasons, purely economic considerations would have forced the suspension before long. The cost of the war was far greater than could be raised by taxation and by borrowing the genuine Savings of the people. A large part of the cost was raised by outright inflation—by the creation of large supplies of credit and currency for the Government's use. This inflation brought about a rise in prices—indeed, that was its object, since it was the rise in prices that compelled the public to diminish its consumption and thus set free resources for the Government.

This rise of prices, which was essential to the conduct of the war, could not have occurred if the gold standard had been maintained, for it would have led to exports of gold and a restriction of credit.[1] So that, even if the need for conserving the gold reserve had not forced the suspension of convertibility for political reasons, it would have had to be suspended in order to permit the rise in prices to continue. In any case, the gold standard was doomed.

After the war, and the hectic boom and slump which followed it, the International Gold Standard was restored in nearly every country of the world. Two causes led to the restoration. The first was the natural wish to return to normality, the wish for 'back to pre-war.' Normality in currency arrangements meant the gold standard; and by most, if not all, of those in authority it was taken for granted that an international system of

[1] In theory, this would not be true if the rise of prices occurred to exactly the same extent in every gold-standard country, belligerent or neutral. But in practice the condition is an impossible one and may be disregarded.

gold convertibility would follow the period of wartime inconvertibility just as peace followed war. The second impelling force was the appalling chaos produced in Continental Europe by the wild post-war inflation, which carried prices in Germany to one million million times their pre-war level, and in other countries to levels only slightly less astronomical. The misery and dislocation produced by this inflation made such a strong impression upon all who were brought into contact with it that the avoidance of any repetition of the experience seemed to be the first principle of monetary wisdom. The gold standard, whatever its other faults may be, does at least nip any such wild inflation long before it has even formed in the bud. This assurance of at least comparative stability largely explains the unanimity of desire to return to the gold standard which enabled the whole movement of restoration to be accomplished virtually within ten years of the Armistice.

The problem of returning to the gold standard was different for different countries. The United States had, with one slight temporary exception, maintained the gold standard throughout. The American price-level had not, however, remained stable. Vast quantities of gold had been sent to New York in payment for munitions and other supplies. In addition, the Federal Reserve Act, which came into force in 1914, provided a much more elastic system for the provision of currency and credit. There was thus an additional supply of gold, a more elastic currency built upon the gold basis, and a plentiful supply of credit based upon the currency. There was therefore no monetary check to the great wartime boom, and prices rose. Even after the 1920–21 crisis, the average level of American prices was nearly 50 per cent. above the previous level. The United States had thus experienced, in four years and on a

considerably larger scale, what had been happening throughout the whole gold-standard world as a result of the increased supply of gold between 1896 and 1914. Since the dollar alone was on gold, the value of gold was determined by the value of the dollar. We can therefore say that the purchasing power of gold in 1922 was about two-thirds of its pre-war level. This reduction in the purchasing power of gold had been achieved in two ways—first, by the concentration of gold within Europe in the reserves of Central Banks, where it could be used as the basis of a greater amount of currency and credit than when it was in actual circulation; and secondly, by the redistribution of gold reserves in favour of the United States.

Most of the neutrals were in much the same position as the United States. They had indeed suspended convertibility, but they had not indulged in inflation to any considerable extent and their price-levels had roughly followed the gold (*i.e.* American) price-level. They were therefore able to restore convertibility at the previous parities. This applies particularly to Switzerland, Holland, and the Scandinavian countries. Spain, on the other hand, is the only country in Europe which never restored the gold standard throughout the post-war period.

Great Britain's position was not very far removed from that of the neutrals. The British price-level had, indeed, risen further than the American, but the difference at the beginning of 1922 (comparing wholesale price indices) was less than 20 per cent. In the course of that year British prices fell more rapidly than American, with the result that by the end of the year there was very little perceptible difference between the two price-levels. During 1923 and part of 1924 a rise of prices in Great Britain reopened the gap, but it closed again in the

second half of 1924. In April 1925, the British Government restored the convertibility of the pound sterling at the pre-war parity of $4.86⅔=£1.

This decision has been much discussed and much criticized in the ensuing years. There was fairly general agreement, even at the time, that the old pre-war parity gave a higher value to the pound than it intrinsically deserved and that the pound was consequently over-valued relatively to the existing equilibrium rate. Since the effort to ' look the dollar in the face ' consequently involved standing on tiptoe, a period of strain could be anticipated before the position became balanced—that is, before the pound grew up to the dollar (by a fall of prices in Great Britain) or the dollar grew down to the pound (by a rise of prices in the United States). The authorities realized the inevitability of this period of strain, but in view of the importance to the prestige of the City of London, and to British financial interests, of restoring the historical parity, they decided that a short period of strain was not an excessive price to pay. But they made two miscalculations. In the first place, they under-estimated the extent to which the old parity over-valued the pound. If an average of three British wholesale price indices is compared with an average of four American wholesale price indices, British prices were only about 5 per cent. higher than American, as compared with the level of 1913. But as we found in examining the purchasing power parity theory in Chapter VII., wholesale price indices are not necessarily of particular relevance to the calculation of equilibrium rates. In fact, since British wholesale price indices consist so largely of imported articles, whose prices are influenced by the rate of exchange, the level of prices as shown by them is as much an effect of the rate of exchange as its cause. In other words, calculations

based on wholesale price indices will tend to understate any divergence between the actual rate and the equilibrium rate. It is almost certain, therefore, that the divergence was more than the 5 per cent. indicated by wholesale prices, and the most generally accepted estimate is that it was an over-valuation of 10 per cent.; but it may well have been even greater. That is to say, the equilibrium rate of exchange between the pound and the dollar was about \$4.38=£1 or even less, rather than \$4.86⅔=£1.

The second miscalculation was to assume that the discrepancy between the level of British costs and prices and those of the United States could be easily removed—in particular, that credit contraction would reduce British costs of production. In the event it entirely failed to do so. Credit contraction and high interest rates created unemployment and diminished the profits of business, but unemployment and low profits failed to bring wages down. In spite of the great labour disputes of 1926 and the constant pressure upon costs, the pound remained over-valued throughout the whole period until the second suspension of the gold standard in 1931. The adjustment never was accomplished. Great Britain learned enough in these years of the disadvantages of having an over-valued currency. Those disadvantages were both general and specific. The general disadvantages arose out of the fact that the Bank of England could never allow conditions of easy credit for fear of losing its gold reserve. Money rates had to be kept high in order to attract foreign funds to London and thus provide a demand for pounds in the foreign exchange market adequate to take the supply and protect the Bank of England's gold reserve. If credit was not actually restricted, it was never comfortably relaxed. The specific disadvantages fell upon

the British export trades, whose costs of production were determined by the British price-level but whose selling prices were fixed by the world price-level. Since the condition of over-valuation is that the former price-level is higher than the latter, it follows that British exporters were in a poor position either to compete in world markets or to make profits.

The other European belligerents had no chance of returning to the gold standard at their pre-war parities. The parities which were finally adopted depended primarily upon the extent to which inflation of prices had been allowed to proceed. Thus in France the new parity was about one-fifth of the old (124 frs.=£1 instead of 25 frs.=£1) since the rise of French prices was roughly five times as great as that of British and American prices. In the countries which suffered the worst inflation, entirely new currencies were introduced (the reichsmark in Germany, the schilling in Austria, the pengö in Hungary, in place of marks and crowns), and the old currencies were exchanged for the new at ratios corresponding to the degree of inflation. Thus the reichsmark had the same parity with the pound as the old pre-war mark, but one reichsmark exchanged for no less than one billion old marks. The fixation of new parities, just as the re-establishment of old parities, may produce either over-valuation or under-valuation of the currency, according as the new parity is fixed above or below the equilibrium rate at the moment. Few countries guessed exactly right. Italy, for example, over-valued the lira and prices had to be reduced before a balanced position was reached. Other countries under-valued their currencies. France was the outstanding example; the new parity of the franc under-valued it so much that French industry benefited for several years from gently rising prices, in sharp contrast to the falling tendency in

the outside world. At the same time French exporting industries, with their costs fixed in terms of the franc, which—so far as the world market was concerned—was far too cheap, enjoyed a competitive advantage.

The process of restoring the gold standard, which began in earnest with the German stabilization in 1924 and the return of the pound sterling in 1925, was virtually accomplished by 1928, when legal form was given to the stabilization of the French franc, which had been in fact accomplished two years previously. In many ways the post-war gold standard went much further than the pre-war gold standard. It embraced, for example, many more countries. Many countries of Europe, which before the war had not belonged to the charmed circle of the gold standard, stabilized their currencies in terms of gold, and virtually all of the South American republics, most of whom had had inconvertible currencies in 1914, followed the fashion. By the middle of 1929 almost the only countries which were not on the gold standard were China, Spain, and Mexico.[1] Not all of these countries adopted the full gold standard or even the gold bullion standard, but the gold exchange standard was extensively employed.

The restorations tended also to follow a certain pattern. As early as the Conferences of Brussels in 1920 and Genoa in 1922 the outlines of the gold standard, post-war model, had been laid down, and in the ensuing years the League of Nations did valuable work in extending the same ideas. The main idea was that each country should have a Central Bank, free of Government interference, to which should be entrusted the gold (or gold exchange) reserves, the control of the commercial banks, and the regulation of the foreign

[1] The currency arrangements of the U.S.S.R. do not lend themselves easily to classification.

exchanges. This fashion of Central Banks has, indeed, outlived the post-war gold standard, and there are very few countries in the world which do not already possess a Central Bank or are taking no steps to set one up. In 1930, as a result of a recommendation of the Young Committee, which was originally appointed to advise on the problem of German Reparations, an attempt was made to provide a formal co-ordination of these Central Banks in the form of the Bank for International Settlements. The B.I.S. (by which abbreviation it is usually known) was given as its original task certain functions of collecting and disbursing Reparation and Allied War Debt payments, but the wish was clearly expressed that it would develop into a clearing house for Central Banks and, eventually, into a sort of Central Bank of Central Banks. In accordance with the principle that the gold standard had been made the corner-stone of post-war currency reconstruction, it was laid down in the statutes of the B.I.S. that it could deal in gold currencies only. The fact that within three years of its founding the gold standard was abandoned in most of the countries of the world, together with the suspension of Reparations and War Debts, has very seriously crippled the B.I.S., but it remains in being and may still serve as the nucleus of some future international system.

THE POST-WAR GOLD STANDARD : COLLAPSE

The gold standard was restored in Great Britain in April 1925; it was suspended in September 1931. Great Britain was followed off the gold standard by the Scandinavian countries, Greece, and Portugal in Europe, and by South Africa and Japan. Australia and New Zealand and most of South America had preceded her. In April 1933 even the Almighty Dollar suspended gold

convertibility and depreciated. Most of the nations of Central Europe, though striving to keep their currencies at parity, entirely suspended convertibility and subjected all exchange transactions to the most rigid control. Only a handful of countries in Western Europe, of which France was the chief, remained on the gold standard for a few years longer, but they too succumbed in 1936. Within little more than a decade from the beginning of its post-war reincarnation, the gold standard had once more been abandoned by the great majority of the nations. This book is not a history, and we are not concerned with the details of this brave experiment that failed. But it will be of assistance in understanding the nature of the gold standard if a brief account is given of some of the causes which contributed to the failure.

Those causes can be grouped under three heads. The *first* contributing cause was that the monetary authorities of the world were no longer as exclusively devoted to the aims of the gold standard as they had been before the war. Stability of exchange rates they wanted—some of them, with memories of inflation, passionately desired. But the gold standard, as we have seen, will provide exchange stability only at a price: the price being the abandonment, or at the very least the subordination, of every other objective. The gold standard will work only if every nation is content to march in step with every other. But this was precisely what the Central Banks after the war were not prepared to do. The economic chaos left behind by the war was so great that no country was prepared to commit itself without reserve to the common tempo of the world economy. The world price-level had risen during the war and slumped disastrously in 1920–21, and no country wished to follow every one of its future gyrations without means of escape. For some, indeed, the task would have

proved not only unpleasant, but impossible. If Australia, for example, had adjusted her internal price-level in the years after 1929 to the movements of the world price-level—or more accurately to the movements of those parts of the world price-level that concerned her, namely, the prices of wool and wheat—she would have had to cut her national income in half, that is, reduce by 50 per cent. the cash income of every member of the population.[1]

In such circumstances adherence to the gold standard was impossible. Even those countries which were not so disastrously affected showed a tendency, long before the fall of prices which began in 1929, to follow after gods that were entirely strange to the monotheistic gold standard. In Great Britain there was a considerable body of opinion, led by economists but backed by industrialists, which demanded a policy of price stabilization. In the United States the same demand inspired Congress, and more than one Bill was introduced to put upon the Federal Reserve Banks the statutory duty of maintaining stable prices. Though none of these Bills reached the statute book, there was no doubt of the strength of the opinion that to seek for stability of prices, rather than of the exchanges, was the primary duty of the monetary authorities. But it has already been made clear that the pursuit of price stability is not compatible with maintenance of the gold standard, except in the unlikely contingency that every country is not only seeking to stabilize prices, is not only agreed upon the same index number as the criterion of stability, but is also substantially succeeding in the task. Only if the world price-level is stable can stable exchange rates be combined with stable prices ; and if every Central Bank is compelled by law to concern itself primarily with the convertibility of its notes, few will be able to devote

[1] See *Australia in the World Crisis*, by Douglas Copland.

themselves to the task of controlling prices. How this ambiguity of objective affected the policies pursued we shall see in a moment; we are here concerned only to point out that return to the gold standard, with its implied acceptance of exchange stability as the sole aim of policy, had not entirely driven out the heretical desire for stable prices.

The *second* group of difficulties in the way of the proper working of the post-war gold standard arose out of the fact that the technical task of maintaining exchange stability was far greater than before the war. As we have seen, the object of the gold standard is twofold: first to provide, by movements of gold, for the stability of the exchanges; and secondly to maintain such a correspondence between the structure of costs and prices in the different countries that the gold movements do not continue. The first function, the maintenance of stability, is not possible unless the second part of the mechanism is working properly; unless, that is to say, it is practicable by small adjustments to keep the different national price-levels in alignment. After the war, however, this process of constant readjustment of prices was much more difficult. The necessary readjustments, in the first place, were very large. It has been suggested that the over-valuation of the pound was of the order of 10 per cent. or more, and it is probable that the French franc was under-valued to at least the same extent. Here then was a divergence of at least 20 per cent. to be eliminated—a much more difficult business than the slight discrepancies of the pre-war era.

In the second place, prices in many cases refused to be readjusted. This was particularly true when a downward readjustment was in prospect. The downward readjustment of British costs after 1925, for example, was rendered impossible by the stubborn

refusal of the trade unions to countenance any reductions of wages and by their readiness to engage in the General Strike of 1926 rather than abandon the point. This was, perhaps, an extreme example of price rigidity, but throughout the world all sections of the public had been made aware, by the rapid changes of the war period, of the significance of price changes and, correspondingly, less ready to acquiesce in them when they appeared to be unfavourable. Just as stability of prices in general is incompatible with the gold standard, so rigidity of particular prices, if they are important in the economic structure (as wages are), will effectively disrupt its working.

Other examples of obstructions to the readjusting function of the gold standard can be mentioned. It will be remembered that smooth working depends to a large extent upon the degree to which the movement of short-term banking funds can be influenced by changes in the rate of interest. Before the war an increase of 1 per cent. in the Bank Rate of the Bank of England would lead to the recall to London of the funds of British bankers placed abroad, an influx of foreign funds to London, and a diminution of the willingness of foreigners to finance their trade by bills discountable in London (*i.e.* to borrow from the London discount market). All these factors would tend to increase purchases of sterling relatively to sales. But in the post-war period, though all these factors operated, they were weaker in their operation. Far less trade was financed by sterling bills drawn on London, and the movement of funds was consequently far less amenable to alterations in London Bank Rate. Moreover, these national reactions to movements of interest rates tended to be overshadowed by the great bulk of international short-term funds answering the calls of speculation or fear, rather than the normal

inducements of interest. An increase in Bank Rate was as likely as not to be taken as a sign of weakness and lead to an export rather than an import of short-term funds. In more recent years this corpus of short-term funds has been an unmitigated nuisance, since the movements to which it gives rise are large enough to swamp all other transactions and yet are not amenable to any of the normal weapons of control in the armoury of Central Banks; it has well earned the name of 'bad money.'

Post-war statesmanship was also prone to provide obstacles in other departments of its policy to the smooth working of the gold standard to which it had ostentatiously devoted itself. The imposition of Reparations and the insistence on the repayment of War Debts are frequently mentioned in this connection. These payments provided an element in the foreign exchange market which was not amenable to control by the weapons of the gold standard. Whatever the Bank Rate or the position of its gold reserve, Germany had to sell marks to pay Reparations and the war debtors had to buy dollars to meet the instalments as they fell due. These elements in the supply of marks and the demand for dollars were fixed, immutable, and impervious to all influence by the Central Banks. But in this respect Reparations and War Debts do not differ from international indebtedness in general. They were not large compared to the total of other debts, and it seems likely that they were more important as a political than as an economic irritant. The whole subject of international debts is left over to the next chapter, but it may be remarked here in passing that when international indebtedness is large, as it was in the post-war era, the task of the gold standard is to that extent more difficult of accomplishment.

Much more important than war debts and reparations were the excessive tariffs of nearly every nation. Tariffs are not in themselves an impediment to the working of the gold standard ; there were tariffs before 1914. But the gold standard cannot work unless a country which is showing a tendency to lose gold is allowed, by lowering its prices, to expand its exports, and thereby to increase the demand for its currency. In the post-war epoch such necessary adjustments were impeded, often deliberately and always effectively, by the frequent and excessive imposition of higher tariffs. It was impossible for a country to achieve a balanced position by expanding its exports. The only alternative was for it to cut down its imports, which added to the depression of international trade and contributed to the sorry game of competitive protection. It is impossible to have an international financial system alongside a commercial system which is fiercely and jealously national.

The *third* reason for the downfall of the post-war gold standard was that the Central Banks, torn by their divided loyalties and aware of the great technical difficulties, failed to observe the Golden Rule. When gold was coming in to the country, they allowed it to pile up in their reserves and did not expand credit so as to raise prices. And when gold was being exported they let their reserves run down without initiating a restriction of credit and a fall of prices. British commentators have been rather too ready to assume that the United States and France were the only sinners in this respect. Both were, indeed, to blame, though American policy was more correct than is often supposed, for the total of bank deposits in the United States (which can safely be taken as representative of the total supply of money) increased over the period 1920 to 1929 by roughly the same proportion as the gold reserve of the

country. What could perhaps be imputed against America for evil is that the gold reserve of the Federal Reserve Banks was throughout this period a much higher percentage of their liabilities than was the case with other Central Banks.[1] The case against France is much clearer, for from 1928 onwards she continuously absorbed gold without initiating any sufficient credit expansion. But Great Britain was far from blameless, for gold exports were consistently disregarded, and the Bank of England was more anxious to keep credit as relaxed as its weak technical position allowed than to contract it in order to produce a fall of prices. The example of British policy, indeed, shows that it is somewhat fanciful to talk of praise or blame in this connection. Throughout the whole of the period 1925 to 1929 Great Britain was comparatively depressed, and it was on the face of it unreasonable to ask that a further depression should be induced. America was prosperous and indulging in what we now know to have been inflation of a somewhat unusual but no less effective variety. Was it reasonable to suggest that she should inflate still further? The truth was that far too much was being asked of the gold standard; the disequilibria were far greater than could be ironed out by small changes in interest rates or credit conditions.

For some explanation of these fundamental disequilibria we shall have to wait until the next chapter. For the moment it suffices to point out that the necessary adjustments were not made; the movements of gold, though they could be interrupted, were not arrested. The nations of the world divided themselves into two groups, those with a chronic tendency to lose gold and those with an insatiable appetite for gold. The reserves

[1] But Americans point out, with considerable justification, that their ratio of gold reserves to total money was lower than in most countries.

of the former were drained, while the latter accumulated far more than their fair share. For a time the reserves of the gold-losing group were saved by the device of borrowing from the gold-gaining group. Great Britain borrowed by maintaining high rates of interest in London. Germany borrowed until 1929 by means of large long-term public issues of securities, particularly in New York and London (which was thus passing on to Germany part of its own borrowings). After 1929 long-term borrowing came to an end, and Germany, too, had recourse to short-term borrowings. A wave of fear which swept the Continent caused the lenders of these short-term funds to ask for their repayment. The borrowing countries could not, of course, repay in full. Austria in May 1931 and Germany in July 1931 had to restrict the repayment of debts to foreigners. Great Britain's creditors withdrew their loans in gold until in September 1931 the approaching exhaustion of the gold reserve of the Bank of England forced the Government to suspend the gold standard. The crisis of 1931 was sudden, but the seeds of it had been sown for several years before.

This continuing maladjustment was one of the causes of the great depression which started in 1929. More will be said on this subject in the next chapter. The point must be made here that it was not the gold standard which *caused* the depression. The same fundamental disequilibria both brought on the depression and shattered the gold standard.

UNSTABLE EXCHANGES

Since 1931 a large part of the world has been living under inconvertible and fluctuating currencies. When the pound first depreciated there was much shaking of

heads, particularly among the countries of Continental Europe which had experienced the post-war inflation, and many prophecies that Great Britain had started down the primrose path that leads to ever-rising prices and the demoralization of all economic activity. These prophecies have been proved untrue. The general level of prices in Great Britain was remarkably steady for some years after 1931—stable in comparison with both the previous behaviour of British prices and the continued fall in the gold countries. There was some excuse for the fears of the timid, for though wild inflation (which is a matter of the Domestic Gold Standard) and exchange instability (which is a matter of the International Gold Standard) are logically distinct, there were before 1931 very few cases of the one happening without the other. But the favourable experience of Great Britain and the other countries which accompanied her off the gold standard attracted a great deal of practical support for inconvertible currencies. Indeed, the depreciation of the dollar in 1933 can be ascribed, at least in part, to the desire to share the benefits of inconvertibility. Those benefits were, in appearance at least, very striking, for every country which suspended the gold standard and allowed its currency to depreciate enjoyed a greater or less degree of recovery from the ravages of the great economic depression, while the handful of countries that continued to maintain their currencies at gold parity for some years longer remained in the depths of depression.

It would be wrong, however, to paint a wholly favourable picture of the effects of exchange instability. Even Great Britain, the first to leave the gold standard, and the greatest gainer thereby, took the lead in organizing the so-called 'sterling bloc,' which included nearly the whole of the British Empire, the Scandinavian countries, Portugal, and one or two countries in South

America. All the countries in the 'sterling bloc' kept *their currencies stable relative to sterling,*[1] *so that the* greater part of Great Britain's trade was done in terms of stable exchange rates. Indeed, the advantages to Britain of leaving the gold standard did not come from the fluctuations of the exchange rates so much as from the escape from over-valuation.

There is also the effect of exchange instability on those countries that remained on the gold standard to be considered. The continued depression in the gold standard countries was at least partly the result of the depreciation of other currencies. For when a country's currency falls in value, its exporters receive a bounty on their sales in countries whose currencies have not fallen. If the pound falls from 120 francs to 80 francs, an English exporter, making an article which costs him £1 and which he formerly sold for 120 francs, can as a result of the fall in the pound reduce his price to 100 francs and still make an extra 5s. profit. The exporting industries of France and those of her industries which compete with British goods are correspondingly handicapped. They lose trade or cut their prices, or both; in any event French prices fall and French unemployment rises. This argument can be carried far too far; it can easily be shown that only a part of the continuing depression in the gold countries, and an even smaller part of the recovery in the non-gold countries, could be directly ascribed to changes in the relative competitive strength of the exporting industries of the two groups. Nevertheless a state of affairs which tends, in however small a degree, to intensify depression in any part of the world is not one which could be conscientiously recommended as a permanent institution.

[1] In one or two cases the rates of exchange were altered from time to time, but they were kept stable between alterations.

Moreover, it must not be thought that the gold countries suffered in inaction the destruction of their trade by what they called 'exchange dumping.' They replied by increased tariffs, possibly discriminating against goods coming from non-gold countries, and by restrictive quotas. The non-gold countries, believing themselves undeserving of punitive discrimination, retaliated in kind. Thus the restrictions to trade mounted up. Nor was this entirely a product of the existence of two groups of countries, one on and one off the gold standard. Between two countries, each of which has an inconvertible and fluctuating currency, movements of the exchange rate are likely at any moment to upset the competitive balance of exporting industries, to lead to a flood of imports from one to the other, and to cries of distress from the industries thus suddenly deprived of their protection. The events of 1931–34 would seem to leave little room for doubt that instability of exchange rates, when it is combined with severe depression, serves to accentuate rather than to relieve the pressure to restrict international trade.

Nevertheless, this conclusion must be related to the circumstances of the time. If the movements of rates of exchange could have been kept within reasonable limits, if they had not diverged far from the equilibrium rates, the disturbance to international trade would have been far smaller. No country can legitimately feel itself damaged by the fact that its neighbour's currency is fluctuating, but only by any under-valuation thereby produced. There were a number of instances in these years of countries quite deliberately inducing an under-valuation of their currency in order to enjoy the trade benefits it brings in its train. These efforts naturally provoked resentment and retaliation, and few countries succeeded in gaining more than a temporary advantage.

The period of fluctuating exchanges began with the fall of the pound in September 1931. After five years' experience, the prevailing opinion in the majority of countries could have been summed up by saying that while the success of depreciation in starting internal recovery had been so widespread that any return to the gold standard was unthinkable, the disadvantages of excessive fluctuation in the exchange markets, and particularly of competitive depreciation, were fully realized. The point had been appreciated that there was no merit in fluctuation itself—that the only reason for not returning to stability was to leave a way of escape open if over-valuation should again develop. When, therefore, the French franc was at length depreciated in September 1936 its fall was accompanied by the initiation of the so-called Tripartite Monetary Agreement between the United States, Great Britain, and France, to which most of the nations of Western Europe subsequently adhered. This Agreement was a somewhat nebulous document, but its main points were that the three countries would co-operate to prevent excessive fluctuations, that they would consult each other before permitting any major change in their currencies' relative values, and that they would not, in any case, countenance any competitive depreciation or excessive under-valuation. The Agreement was not a step back in the direction of permanent stability; on the contrary, it was used to secure several changes of exchange rates. But it was an assurance that there would be substantial day-to-day stability of the exchange rates, that large changes would be done by agreement, and that no country would be prejudiced by another's currency policy.

The Tripartite Monetary Agreement lasted until the outbreak of war in September 1939—indeed, it is still formally in force, at least between Great Britain and the

United States. It is on some such lines as these that an international monetary system can be reconstructed after the war is over. The gold standard is almost certainly gone for ever. Nations are too nationalistic in their economic policies, too unready to submit themselves to painful discipline for the sake of a world order. That does not mean that there is no longer any use for gold—on the contrary, the more the gold standard is abandoned, the more competition there seems to be to acquire gold. After all, abandoning the gold standard means only the abandonment of buying and selling gold *at a fixed price*. Gold remains the substance of universal value, which Governments or Central Banks will always buy at the prevailing price. The Tripartite Agreement has, in fact, perpetuated this use of gold. The three countries undertook to control their currencies from day to day. This involved the British control, for example, in purchases of francs or dollars at times when the pound was strong, to prevent it from rising. These francs or dollars were promptly converted into gold. Similarly, the French control converted into gold any pounds or dollars it bought, and the American control any francs or pounds of which it took possession. Gold was still the ultimate means of payment. Some day it may be deposed even from that position. That might follow from one of two causes. First, the world might decide that some other substance—silver or even cowrie-shells—would perform the functions of an ultimate means of international payment more efficiently than gold. But gold is a long way ahead of any of its rivals in the general estimation. Or secondly, the world might decide to do without an ultimate 'means of payment' altogether. But when that day comes the only means of preventing complete anarchy of the exchanges will be for the controlling authorities in each country to trade in each

other's currencies. This prospect is likely to remain so unpleasant to debtors and creditors alike that—subject to one proviso—gold will find constant employment as a neutral go-between.

The proviso is that the world's gold remains sufficiently well distributed among the chief nations of the world to serve as a medium of settlement. At present, about three-fifths of the world's gold is in the United States, and more will undoubtedly go there in the course of the present war. If a time should come when there is no gold—except, of course, newly mined gold—anywhere else, then gold might lose even this last function. As things are, its value is now ultimately dependent only on the fact that the United States Treasury is willing to go on paying $35 an ounce for it. Gold, in fact, is a pensioner of the dollar, and if ever its $35 pension is withdrawn, its value might sink to what it would fetch in dentistry. The United States, as the world's greatest holder of gold, and the British Empire, as the world's greatest producer of gold, both have an interest in maintaining its value. But those interests may not always be decisive. We may be witnessing the penultimate chapter in the history of gold as a monetary metal.

CHAPTER X

INTERNATIONAL EQUILIBRIUM

THE PROBLEM OF BALANCE

THE gold standard is the only international currency system the modern world has ever known. For decades before the war it worked with remarkable success, in that stability of the exchange rates between the different national currencies was secured without exposing any nation to the necessity of excessively severe adjustments of its national economy for the sake of conformity with the international system. It worked, moreover, with a remarkable absence of conscious direction, not because there is anything necessarily automatic about the idea of an international currency system, but because of the lucky accident that the currency authorities of each nation were forced—by their currency laws, and by the history of the gradual evolution of their currencies from purely metallic coinages into modern credit systems, to pay almost exclusive attention to preserving the convertibility of all forms of money into gold. In those days, for reasons entirely unconnected with the stability of the foreign exchanges, the public opinion of nearly every country demanded one thing, and one thing only, of its money—that it should be convertible on demand into gold coin. So long as this was the dominant belief about money, the operation of the gold standard followed with automatic ease. When gold was exported, credit would be restricted, not because

Central Banks were consciously obeying a Golden Rule, but because they were fearful of jeopardizing that confidence of the public in the free convertibility of their money into gold which constituted it a 'sound currency.'

After the war the attempt was made to restore the international gold standard. But the conditions had changed in the many ways described in the last chapter—and not least in the psychological approach of the public to the question of money. The chief demand was now for stability of prices—or, more vaguely, for the avoidance of inflationary booms and deflationary slumps. Stability of the exchanges was recognized as desirable, but as only one, and that not the most urgent, among many objectives. For the reasons that have been explained, the post-war gold standard collapsed.

The present position of the world is that of having lost the only international monetary system it knew and of not knowing where to find another. The crux of the problem is, in a sense, the conflict between two opposed schools of economic thought. One school finds the solution of the economic troubles of the world in a large, diversified, and untrammelled volume of international trade, permitting each nation to supply the shortcomings of the others and allowing the greater stability of the whole world to restrain the instabilities of each national economy. This school naturally puts its faith in stability of the exchanges and in the gold standard. Instability of prices is recognized as an evil, but the way to remedy it, in this way of thinking, is by international action. The opposing school of thought denies that participation in an economic system of world-wide dimensions makes for any greater stability. On the contrary, every nation is prone to believe that its economic troubles have come from outside, and that if only it could divorce itself from these malign and alien influences it could in isolation

achieve stability. Accordingly, these people would have a purely national credit policy, independent of any other.* If in the process stability of the exchanges has to go and international trade has to be reduced to a minimum, these are but the necessary price that has to be paid for independence.

It is not the purpose of this chapter to resolve this controversy, but rather to inquire whether there is any necessary conflict of interest at all. In the light of history it would be hard to find any warrant for the belief that the foreign trade of a country and the welfare of its domestic industries are necessarily antagonistic. England's wealth has been founded upon her trade, and even those of her industries which have no direct connection with foreign trade could not have grown to their present size had the country not laid itself out to be the workshop of the world. Similarly, foreign trade cannot flourish without a prosperous population to purchase the imports and a thriving, diversified industry to supply the exports. Particular industries may, of course, feel themselves aggrieved by the competition of imports, but in the eye of history—and of elementary reason—foreign trade and domestic industry are not antagonists but partners.

An analogy may make the matter clearer. We have already, in the course of this book, several times come across the fact that agriculture and industry react in very different ways to the onset of depression. When the demand for his products falls, the farmer lowers his price but does not usually restrict his production ; the manufacturer may reduce his prices to some extent, but in the main he keeps prices fairly steady and cuts down his volume of production. The farmer sells all he produces, but at unremunerative prices. The manufacturer sets prices which, if his volume of sales were

sufficient, would be remunerative, but he cannot find any one to buy more than a fraction of his capacity to produce. When a situation of this sort has developed, the interests of the two sections appear to be directly antagonistic to each other. The farmer calls for higher prices, even at the cost, if need be, of some restriction of production. The industrialist wants a higher volume of demand at the prevailing level of prices.

But it does not take an economist to see that in the long run the prosperity of each class depends upon the prosperity of the other. As the farmer recovers prosperity, the manufacturer may not gain much in price, but he will benefit by being able to sell a larger volume; and as the manufacturer recovers his prosperity, the farmer may not sell a much larger quantity, but he will get a higher price for it.

The analogy can easily be applied to the case of foreign trade versus domestic industry. When each is flourishing, each will supplement the prosperity of the other, and what benefits one will in the end benefit the other. But when both are in the doldrums, each will reinforce the misfortunes of the other. If domestic industry is depressed the lack of money available for spending on imports and the demand for protection of markets will upset the balance of the foreign exchanges, shatter the gold standard, and reduce international trade. And if international trade is brought to a standstill, the poverty of those who live by it will react upon the domestic industries of the countries where they reside. Excessive instability of the exchanges will make any internal stability impossible of achievement; and excessive inflation or deflation within the borders of the nations will effectively prevent any exchange stability being maintained between them. It is more than a coincidence that the periods of greatest exchange

stability have been the periods of greatest internal stability as well as of greatest international trade; or that the gold standard has proved unable to survive either the great inflation of the war years or the great deflation which started in 1929.

The aims of the ideal policy should therefore be to attain the greatest possible degree of balance both internally and externally. It should be noted at the outset, however, that the condition of balance is not easy to define, certainly not within the bounds of a rigid formula. We discussed the problem of balance in its internal aspects in Chapters V. and VI., and we found that it could not be defined as the absolute stability of any particular price or group of prices, although as a useful first approximation it could safely be assumed that balance would involve very much more stability of prices than the world has recently experienced. Similarly, balance in the external sphere does not necessarily connote the absolute fixity of any ratio between different national moneys; but it probably does involve very much more stability of exchanges than has existed in the last few years. In this chapter we shall inquire more closely into the nature of international equilibrium.

The analogy of the relations existing between farmer and manufacturer was deliberately chosen to illuminate the nature of the financial relations between nations. The countries of the world group themselves quite naturally under the two headings of 'primary producers' and 'industrial nations.' No nation, of course, exports raw materials exclusively, just as no nation exports manufactures exclusively; but, in the great majority of cases, one class or the other preponderates. In the cases of New Zealand and Chile, for example, exports of foodstuffs and raw materials in 1929 accounted for

96.4 per cent. and 95.8 per cent. respectively of the total value of exports, while of the exports of the United Kingdom and Belgium 69 per cent. and 59.3 per cent. were of the category of 'wholly or mainly manufactured.' Moreover, the analogy goes further. For predominantly agricultural countries react to depression in very much the same way as the individual farmer: that is, the prices of the goods they sell to foreign countries fall very drastically, while the volume (*i.e.* weight) of their exports is fairly well maintained. The industrial countries, on the other hand, have the contrary experience. The prices of their exports do, indeed, fall, but to a smaller extent than those of the primary commodities, while the volume falls off considerably.[1] In the agricultural countries the population continues to be fairly well employed, but for a ruinous return; while in the industrial countries wage-rates are comparatively well maintained, but unemployment is rife.

The two classes of country also differ in another most important respect. Generally speaking, the primary producers have borrowed in the past—and, when they can, are still borrowing—from the industrial countries, and, of course, in normal times, they pay interest on their debts. The industrial countries, on the other hand, are lenders of capital and receivers of interest. This is not an absolute rule, but it is fairly well borne out by the facts, in much the same way as is the empirical generalization that, within each nation, the country is indebted to the towns.

Once more, therefore, we are brought up against the problems of capital-creation, and we shall find them

[1] For example, between 1929 and 1931 the average *price* of Australian exports fell by 41 per cent., but their *volume* actually increased by 10 per cent. In the same period the average *price* of United Kingdom exports fell by only 14½ per cent., but their *volume* by 37 per cent.

almost as important to an understanding of monetary principles in the international as in the domestic sphere. But before carrying the argument any further it will be of advantage to examine more closely exactly what is meant by lending and borrowing on the part of a nation.

THE BALANCE OF PAYMENTS

The first point that was emphasized in describing the workings of the foreign exchange market in Chapter VII. was that every transaction in that market necessarily has two sides to it. If pounds are exchanged for dollars, then in the same transaction dollars are exchanged for pounds. It follows that if we make a list of all the various elements entering into the total sales of pounds in the foreign exchange market and another list of all the various items contributing to the purchases of pounds in the foreign exchange market, the two lists must of necessity add up to the same number of pounds. This is axiomatic, for pounds cannot be sold without being bought. When the gold standard is in force, some payments are made, without going into the foreign exchange market, by the export of gold. But if we enter in one list the amount of the payments made in this way and in the other the value of the gold exported or imported to make them, the total of the two lists will still be equal. These lists, when completed, will constitute a ledger, as it were, of all the payments made, for whatever purpose, *by* people in the United Kingdom *to* people in other countries, and of all the payments made, for whatever purpose, *to* people in the United Kingdom *by* people in other countries.

Such a ledger is called a Balance of Payments. The most vital point to bear in mind in relation to the Balance of Payments is that it exactly balances. This is

more than usually vital, because the word 'balance' is ambiguous. The Balance of Payments is frequently confused with the Balance of Trade, which is a list of the values of goods imported and exported. Now the Balance of Trade does *not* balance, except by accident, and for every country there is a net excess of imports or exports. One is constantly reading of an 'adverse balance of trade' (*i.e.* a net excess of imports) or of a 'favourable balance of trade' (*i.e.* a net excess of exports). It is therefore important to bear in mind the fact that the word 'balance' can mean two things ; first, a net excess ; and secondly, equivalence. In the phrase, 'Balance of Payments,' it should always have the latter meaning.

The Balance of Trade is, in fact, the most important item in the Balance of Payments ; for in setting out to make a list of all payments made or received, payment for goods bought or sold is obviously the first entry. We thus enter payment made for goods bought on the debit side, and payment received for goods sold on the credit side. In practice, it is more convenient merely to enter the net excess of one or the other.

One more confusion results from the fact that the Balance of Trade usually only includes those tangible goods which can be seen, weighed, and counted. It is, in a very real sense, a Balance of Visible Trade. But nations can earn or spend their resources just as well by rendering or paying for services as by selling or buying goods. Thus, when an American citizen pays £50 to be transported across the Atlantic in a British liner and spends a further £50 in hotel and travelling expenses after he arrives in England, the demand for pounds in exchange for dollars has increased by £100 in precisely the same way as if he had stayed at home and bought £100 worth of English goods. The second item on our list, consequently, must be the Balance of Invisible

Trade. It includes payment for all such things as shipping freights, insurance premiums, tourists' expenditures, royalties on cinema films, and so forth. It is also convenient to include under this heading any gifts made by citizens of one country to citizens of another. In the case of the United States this item is of considerable importance, for there are in America large numbers of recent immigrants who in normal times send home a substantial part of their income. In addition, Americans have in the past been very generous with their contributions to missionary work and other charities in other countries. Since payments of this sort, made voluntarily without any return, are included in this item, we must also, for the sake of logic, include payments made *involuntarily* without the prospect of any return, such as War Indemnities and Reparations. These invisible items are of course much harder to record than their visible counterparts, for they do not, on crossing a frontier, pile themselves up on warehouse floors for enumeration and valuation by customs inspectors. This is probably the only reason why they are counted separately in most Balances of Payments, for their economic effects are precisely the same as those of visible trade.

The third item in the Balance of Payments is that of interest receipts or payments, simple to comprehend but difficult to estimate. It should include every payment in respect of dividends or interest which crosses a national frontier. It includes, of course, payments made by, or to, private citizens as well as governments.

These three items constitute what is called the income account of the Balance of Payments.[1] They should include every sum received by the country from abroad which it can regard as income, that is, the receipt of

[1] This must not be confused with the National Income, which is the sum total of the incomes of the individuals comprising the nation.

which neither increases its indebtedness nor diminishes its capital; and they should similarly include every sum paid by it which neither increases its capital nor diminishes its indebtedness. These three items (which may, of course, be sub-divided almost *ad infinitum*) do not constitute the whole Balance of Payments, for many payments are made which do not fall within the definition of income. The debit and credit sides of the income account need not, therefore, be exactly equal. An example will make the matter clearer. In 1928 the United Kingdom purchased from abroad goods to the value of £353,000,000 more than the value of her exports.[1] Thus the Balance of Visible Trade resulted in a net payment of that amount by the United Kingdom to foreigners (a net out-payment). The Balance of Invisible Trade, however, was estimated to result in a net in-payment of £225,000,000. On the score of interest, receipts were estimated to exceed payments by £250,000,000. The income account of the balance of payments of the United Kingdom for that year could therefore be set out as follows, using a plus sign to denote an in-payment and a minus sign to denote an out-payment:

Net Balance of Visible Trade .	−£353,000,000
Net Balance of Invisible Trade .	+£225,000,000
Interest (net)	+£250,000,000
Net Total of Income Account	+£122,000,000

This sum of £122,000,000 is in a sense the 'saving' of the country. But we must beware of confusion of

[1] All the figures in the present chapter (except where otherwise mentioned) are taken from the series of memoranda of the Economic and Financial Section of the League of Nations, entitled "Balance of Payments," or from the official estimates of the British Board of Trade and the American Department of Commerce.

thought through confusion of terms. The income account of the balance of payments is not the same thing as the National Income. The National Income is the sum total of the monetary values of all the goods produced and services rendered by the individuals composing the nation, whether or not the goods or services, or the payments for them, cross the frontier. The income account of the balance of payments is a record of those transactions of the nation's citizens with other nations' citizens which do not involve either the creation or the redemption of debt by either party to the transaction. In the same way, the net total of the income account must not be confused with the Saving of the nation as defined in Chapter V., which is the amount by which the incomes of all the individual citizens of the nation exceed their expenditure on current goods. It will be as well, then, if we avoid all use of the word 'Saving' in the present connection. For the somewhat cumbrous phrase, 'net total of the income account of the balance of payments,' we will substitute the words 'Foreign Surplus.'

There are obvious analogies between the Foreign Surplus and Saving. If we regard each nation as a unit and disregard all transactions which concern its citizens alone, then the Foreign Surplus is, in this sense, the Saving of the nation *vis-à-vis* other nations. The Saving of an individual is the difference between, on the one hand, the income he gets by making goods or providing services or receiving interest or gifts and, on the other hand, his expenditure on the current goods made by others or on their services or on paying interest, etc. If in this sentence nations are substituted for individuals, we have an almost exact definition of the Foreign Surplus. Moreover, the analogy goes further. When an individual has saved a certain sum, he can do one of three things : he can either hoard his Saving in

money, or he can lend it to somebody else (without any assurance that the borrower will use the loan for Investment), or, finally, he can spend it on some tangible piece of capital. Now, to the individual it does not matter very much which of the three courses he pursues. He will, it is true, receive interest on his loan; or an income of some sort, either of money or of direct pleasure, from his Investment; while hoarding money will bring him in nothing. But by any one of the three ways he will increase his capital: the first two will give him a claim on goods in the future, the third will give him direct ownership of something of durable value. But, as we saw in Chapter V., it does matter most vitally to the community which of the three courses he takes, and the condition of economic equilibrium is that for every unit of Saving there shall be a corresponding unit of Investment, neither more nor less.

Now, when a country has accumulated a Foreign Surplus, it too has certain alternative courses open to it. It can hoard the Surplus in gold, which will yield it no income, but is a claim on the products of other countries in the future. Or it can lend the Surplus to some other nation or nations. From the point of view of each individual nation it is not of vital importance whether the Surplus is hoarded in gold or lent. In either case it has increased its capital assets. But the analogy with the argument of Chapter V. would lead us to suspect that it is of importance to the whole world that each nation's Foreign Surplus should not merely be lent and not hoarded, but that it should be lent in such a way that something analogous to Investment happens to it.

What, in the international sphere, would be analogous to Investment in the domestic? Investment was defined as the expenditure of money in such a way as would

increase the total supply of goods and services available for distribution in future years. If capital has been borrowed to finance the Investment, the increased supply of goods and services in the future will enable the borrower to pay the interest on his loan without having to reduce his consumption to do so. Translating this into the international sphere, we may say that the analogue of Investment is the expenditure of the Foreign Surplus in such a way that a greater volume of goods and services will be available for exchange between nations in the future than in the present. The direct Investment of an individual in, say, a house, or in a factory under his own control, can be paralleled by the direct Investment of nations in their colonies. Indirect Investment by means of a loan made by the Saver to the Investor can be paralleled by loans made by one nation to another enabling the latter to develop its export trade. In either case, the result (unless the Investment is unsuccessful) is that the country which has accumulated a Foreign Surplus will in the future be able to import a greater total of goods and services without having to provide more goods and services of its own in return, *i.e.* the Saver will live on part of the surplus of goods produced by the Investment.

The objection may be made at this point that no country wishes to import more than it has to. It is true that the prevailing opinion regards all imports as evils. But one does not have to be a Free Trader to realize that imports which do not have to be paid for are obviously welcome. No individual objects to receiving, by virtue of his past saving, more than he is at present producing. Getting more than he gives never made any man poorer, and what is true of an individual is also true of a nation. An increase of imports may temporarily embarrass particular industries. But an increase of imports of the

nature we are now discussing cannot possibly hurt the nation as a whole. It merely means that the amount of goods and services available for consumption by the individuals making up the nation is increased. Any nation which impedes the importation of goods and services in payment of interest on its past investments, is merely deliberately impoverishing itself.

We may therefore define International Investment as Investment by one country in another country (either directly or by means of loans) in such a way that the export of goods and services by the latter country and the import of goods and services by the former country are both eventually increased. Any one who cannot accept this definition is implicitly denying the advisability of all forms of foreign lending. For interest cannot be paid between countries in any way except in goods and services. It cannot be paid in gold, for the available supply of gold is far too small. If the creditor country refuses to accept payment by goods and services, the only alternative for the debtor is default.

We are therefore on the verge of a Savings-and-Investment theory for the international sphere. But before discussing it further let us return to the Balance of Payments, which we left half-finished, and see how it distinguishes between the different ways in which a nation may dispose of its Foreign Balance.

The counterpart to the income account is the capital account. Since the whole Balance of Payments balances out exactly at zero, it follows that the net total of the capital account must be equal and opposite to the net total of the income account. If the net total of the income account is + £122,000,000, then the net total of the capital account must be − £122,000,000.

The composition of the capital account is unfortunately not as simple a matter to determine as its net

amount. The ideal solution would be to have three items representing the hoarding of cash; direct International Investment in colonies, or in enterprises carried on abroad but owned at home; and finally, loans to other countries. The first of these items is simple enough, for the net import or export of gold will represent the extent to which the nation's stock of international currency has increased or diminished.[1] This is true whether the gold standard is in force or not; for if present experience is any guide, Central Banks will continue to buy and sell gold even when the legal provisions ensuring convertibility have been suspended. The difference is that under the gold standard the Central Bank has no choice in the matter, but is compelled to buy and sell in unlimited amounts at fixed prices, while under a régime of inconvertible currencies it can buy and sell at its own discretion and at varying prices. The first item, then, is gold.[2]

The other two items unfortunately are not separately identifiable. Indeed, some countries entirely abandon the attempt to make any estimate of the net volume of borrowing or lending. They know, from the income

[1] Except to the extent that it is imported for use in industry, or exported merely as one of the products of the country's mining industry. So far as imports are concerned, non-monetary imports cannot be distinguished from monetary ones, but for most countries they are almost always relatively small and can be disregarded. But the bulk of exports of gold from South Africa is properly regarded not as an export of capital, but on the same footing as exports of iron ore or coal. It should therefore be included in the Balance of Visible Trade.

[2] Compilers of Balances of Payments show the greatest variety in placing this item, some including it in the income account, some in the capital account, some as a special item on its own. The method used here seems most logical. But it should be realized that there is no uniformity of method in setting out a Balance of Payments. The form used here differs from many other statements, and it has been adopted not necessarily as the most correct but as the most suitable for developing the particular line of argument of this chapter.

account, what the net total of the capital account must come out to, and the volume of borrowing or lending is inserted at such a figure as will make the total correct. This is the method adopted for the British Balance of Payments, which is set out for 1928 as follows:

Net Balance of Visible Trade	−£353,000,000	
Net Balance of Invisible Trade	+ 225,000,000	
Interest (net)	+ 250,000,000	
Net Total of Income Account		+£122,000,000
Gold (net)[1]	− £5,000,000	
Movement of Capital (net)[1]	− 117,000,000	
Net Total of Capital Account		−122,000,000

The interpretation of these figures is that in 1928 Great Britain imported goods and services which were valued at £128,000,000 more than the goods and services she provided in exchange (*i.e.* a debit of £353 millions on visible account *less* a credit of £225 millions on invisible account). She was enabled to do this by her interest income, which, indeed, was so large that it sufficed to increase British capital by £122,000,000 after meeting the debit on account of visible and invisible trade. Of the accretion to capital amounting to £122,000,000 the country took £5,000,000 in cash (*i.e.* gold), the remaining £117,000,000 being lent.

In other countries, notably the United States, an attempt is made directly to estimate the movement of capital. The two main heads under which this is done are short-term capital and long-term capital. Short-term capital consists of banking funds, such commercial

[1] Both these items are out-payments—that is, the payment was made by Great Britain to the outside world. But the gold, of course, flowed *into* Great Britain, and the total of British capital assets was increased by the investment of £117,000,000.

loans as those represented by bills of exchange, uncollected debts, and so forth. Long-term capital consists of all loans which are raised by a definite issue of securities, with an ultimate and definite date of redemption. Short-term loans are almost certainly not used for International Investment. Within each nation, short-term loans made by the public to the banks (*i.e.* deposits) can sometimes be used for Investment, subject to certain safeguards, for the banks are justified in assuming that all of their deposits will not be withdrawn at once. With international short-term funds the case is different, for recent experience has shown that there is a very decided risk of wholesale withdrawal. But although it is safe to assume that short-term loans are *not* International Investment, we cannot safely assume that all long-term loans *are* used for International Investment. Before the war of 1914–18 that might have been a permissible first approximation, but even then many loans were intended merely to meet the deficit of a needy Government, or to finance a war, without contributing in any way to the development of future exports.

After the war this latter class of loan almost entirely swamped projects of International Investment. We cannot therefore assume that the distinction between short-term and long-term loans is the same as that between unproductive loans and International Investment—it is merely a distinction of convenience.

The figures of the Balance of Payments of the United States for 1929 may be quoted as an example of the method of directly estimating capital movements. It will be noticed that the two totals do not come out at the same figure, and a final item of 'errors and omissions' has therefore to be added. This method consequently loses in symmetry something of what it gains in honesty.

Net Balance of Visible Trade .	+ $382,000,000	
Net Balance of Invisible Trade .	− 681,000,000	
Interest (net)	+ 699,000,000	
Net Total of Income Account (Foreign Surplus)		+ $400,000,000
Gold (net)	− $120,000,000	
Net movement of Long-term Capital	− 94,000,000	
Net movement of Short-term Capital	− 95,000,000	
Net Total of Capital Account		− $309,000,000
Errors and Omissions		*− $91,000,000*

The interpretation of these figures is similar to that of the British estimates. Taking visible and invisible trade together, America bought in 1929 $299,000,000 worth of goods and services more than she sold—a large debit for services being partly offset by a credit for goods. She was thus enabled to devote $400,000,000 out of her interest receipts, amounting to $699,000,000, to increasing her capital. Of this $400,000,000 she took no less than $120,000,000 in gold, increasing her long-term loans by $94,000,000 and her short-term loans by an almost exactly equal amount. An item of $91,000,000 is needed to square the accounts. It may be added that the official estimates of the American Balance of Payments prepared by the United States Department of Commerce are remarkably detailed. The items which have been summarised above are merely the net totals of many sub-items, the total number of which is over a hundred. If other Governments prepared equally detailed estimates, our knowledge of these matters would be incomparably enhanced.

The British and American Balances of Payments are alike in that both show a positive net total on income account; both, that is to say, are lending nations. It

will be of interest, therefore, to add the Balance of Payments of Australia, a borrowing nation, for the year July 1928 to June 1929 :[1]

Net Balance of Visible Trade .	− £8,385,000	
Net Balance of Invisible Trade .	+ 3,902,000	
Interest (net)	− 34,977,000	
Net Total of Income Account .		−£39,460,000
Gold (net)	+ £768,000	
Net movement of Capital . .	+ 38,692,000	
Net Total of Capital Account .		+£39,460,000

In this year Australia borrowed not only to finance the net excess of imports (visible and invisible together) of £4,483,000, but also to pay the interest on her past borrowings. She was therefore in almost exactly the opposite position to Great Britain, which was able to pay for her excess of imports out of her interest receipts and still have enough over to make further loans of more than a hundred million pounds.

INTERNATIONAL INVESTMENT

We must now return to the theory of international equilibrium which we are constructing on the analogy of the domestic Savings-and-Investment principle.

In the domestic sphere, the theme of Chapter V. was that any excess of Saving over Investment produces disequilibrium—a shortage of purchasing power to buy the products of industry, falling prices, and unemployment. These results follow from the fact that the stream of money coming into the market to purchase the products of industry is less, by the amount of the excess Saving, than the cost of those products; that is, than

[1] These are the estimates of Dr. Roland Wilson.

the incomes that have been paid out to produce them. The Saving merely accumulates as a financial charge upon the future without any provision being made, by increasing the capital wealth of the community, for meeting that charge in future. This is true whether the Saving is hoarded in the form of currency or deposited and left idle in the banks. The hoarding of currency, however, has the additional disadvantage that it may cause a shortage of currency for other purposes.

The analogy in the international sphere must not be pressed too closely. But we can draw several interesting parallels. For example, if the nation that has accumulated a Foreign Surplus refuses to lend it, but insists on taking all of it in gold, there is an immediate risk of a shortage of gold in other countries. If these other countries are on the gold standard they will be forced to start a restriction of credit and to raise their rates of interest, thus leading to an excess of domestic Saving over domestic Investment to add its disequilibrium to that produced in the international sphere by the inequality of Foreign Surplus and International Investment.

If the country with the Foreign Surplus pursues the second alternative course—that is, if it does not take its Foreign Balance in gold, but merely leaves it as a debt owing to it by foreigners without enabling it to be used for International Investment—the immediate effects are not so bad. For the foreigners with whom the Foreign Surplus has been left have in effect borrowed it, and their negative Foreign Surplus will offset the positive Foreign Surplus of the lender. It is as if, in the domestic sphere, the Saving of one group of individuals had been cancelled by the Unsaving of others. But in the long run the effects will be damaging. For the transfer from the Savers to the Unsavers is not a gift but a loan. The interest on the loan and its eventual repayment will call

for an eventual transfer of wealth from one nation to the other, and since the transaction has not in any way assisted to increase the future exporting capacity of the borrower, the future transfer of wealth will be a net burden. The creation of debt without the simultaneous creation of income-producing capital leads to usury.

The reader has been sufficiently warned that the relations between Foreign Surplus and International Investment are not precisely similar to those between Saving and Investment. But on the whole the similarities outweigh the differences. In either case, the essential point to recognize is that the accumulation of mere money or the piling up of money debts may serve the individual person or nation for enrichment but they do nothing to enrich the community. The abstention from consuming which has produced the Saving or the Foreign Surplus is therefore frustrate and futile, and any attempt to enforce the claims on future wealth created by it can succeed only at the cost of diminishing the future consumption of the borrower. The world is then faced with the alternative of default on debts or the enslavement of the debtor.

The principles of foreign lending should therefore be twofold. Creditor countries, those with positive Foreign Surpluses, should take care that they make long-term foreign loans for productive purposes to the extent of their Foreign Surpluses, and they should be prepared to receive their interest in the shape of goods and services imported from their debtors. Debtor countries, on the other hand, should take care that their borrowings are invested in such a way as will develop their export trades and provide them with sufficient additional exports to pay the interest charges on the loans. If they do not do so, the interest can only be paid by cutting down

imports, that is, by reducing the total consumption of the population.

The application of these principles is far from being simple. One obvious complication is that the volume of practicable International Investment in this sense is limited. If creditor countries continue their present policy of preventing the payment of interest on loans in goods and services there will in future be no practicable volume of International Investment at all. But even without this additional complication, it is not possible to invest an unlimited amount of capital in exploiting the export trades of the undeveloped regions of the world. Even without obstructions, the growth of international trade must be a gradual business. One corollary of this is that the Foreign Surpluses of the creditor nations should not exceed the capacity of the debtors to absorb loans for productive purposes. If Foreign Surpluses grow too large, the mechanism will be choked.

The other corollary is that the direction and amount of foreign lending should be closely connected with the stage of economic development of the countries concerned, with the possibilities they present for rapid exploitation or their capacity for absorbing imports from other countries. Whether a country should be a lender or a borrower should not be decided by its whim, but by its place in the world economy. In the decades before 1914, the matter was roughly decided by the level of interest in the different countries. In some countries, *such as the Argentine, the possibilities of development* were large and the domestic supply of capital small ; as a consequence the prevailing rate of interest was high. In Great Britain, for converse reasons, the rate was low. Since the Argentine offered a higher yield, British capital was invested there rather than at home. Difference in interest rates was only an approximate method

of judging comparative need for Investment, and the history of nineteenth-century foreign investment is full of crises and failures. But underneath these imperfections it was possible to see a system, which is far more than can be said for the chaotic conditions of the post-war years. Even if international loans were not always productively invested, the amounts involved were too small to upset the world's monetary mechanism. There were only a few lending nations, of whom Great Britain was much the largest. The borrowers were, in the main, young, empty lands where the investment of capital yielded high profits in the shape of expanding exports. Great Britain, the chief creditor, was a Free Trade nation which imposed no restriction on interest paid in goods. Most nations were neither creditors nor debtors, borrowers nor lenders, but approximately balanced their accounts without recourse to international movements of capital.

The importance for every nation of accommodating its international borrowing or lending—indeed its whole international commerce—to the place it occupies in the economy of the world is a vital point in the construction of any international monetary system that is to have a chance of working. The analogy between nations and individuals can easily be overdone, but in this respect it is useful, for the nations can properly be regarded as men in different stages of development. Some are young and just setting out in business, others are approaching maturity, while others have a lifetime of work behind them. In order to clarify the matter, we can distinguish six separate stages of development. These are set out below ; names have been given to the stages, and though the nomenclature is inelegant it expresses fairly exactly the economic characteristics of each stage.

Nations in the first stage can be called *Immature*

Debtor-Borrowers. They should be young, empty countries just starting on the career of international trade. The first loans granted to them will enable them to import goods in excess of their exports. As a result of their borrowing they are enabled for the time being to buy more than they sell, to consume more than they produce. These nations will consequently have negative (or 'adverse') Balances of Trade. They will, it is true, have to pay interest on their borrowings, but in the first few years the amount of interest they pay each year will be less than the year's fresh borrowings. These countries are, then, net importers both of goods (including services) and of capital. It goes without saying that the capital should be imported in the shape, not of gold, but of goods, which can be so applied that they will assist in building up an export trade—railway material, industrial machinery, farm implements, and the like. This was the way in which the British Dominions and many of the South American countries got their start in the nineteenth century.

The second stage is that of the *Mature Debtor-Borrowers.* After some decades of borrowing, a change should come over the Balance of Payments of the young country. On the one hand, the gradual accumulation of interest charges on past borrowings should eventually grow to be larger than the current borrowings. The nation is then paying back in interest more than it is borrowing in new loans. At the same time, if the loans that have been contracted in the past have been productively invested, they should be bearing fruit in the shape of rising exports. The payment of interest in excess of new borrowings is thus made possible by the emergence of an export surplus (a positive or 'favourable' Balance of Trade), itself due to the borrowings of the past. These countries, then, though still borrowing from

abroad, are beginning to bear some of their interest burden by exporting goods. They are importers of capital, but exporters of goods.

In the third stage (*Debtor-Lenders*) the nation ceases to borrow from abroad at all. It still, however, has the burden of interest on its past borrowings, but the development of its export trade is such that it can now afford not only to pay this interest, but also to reduce its capital indebtedness. Whether in fact it reduces its own indebtedness or prefers to start lending to others is immaterial, both processes having the same economic effect. They can both be called lending for convenience, but this group of nations could just as well be called *Debtor-Repayers*. The significant point is that they have started to export capital, being enabled to do so by the fact that their net export of goods has grown to be larger than their payments of interest.

The fourth stage is the natural development from the third. This is the stage of the *Immature Creditor-Lenders*. These are nations which have paid off all their previous indebtedness or, at least, have foreign assets larger than their foreign indebtedness. On their net excess of foreign assets they naturally receive interest, but their receipts of interest are at first less than their loans—that is, the main source of their Foreign Surplus, which they lend to other countries, continues to be their positive (or 'favourable') Balance of Trade. These countries are like men who are beginning to build up an investment income, but still rely for the greater part of their new savings on their current income from work rather than on the interest yield of their past investments. These countries, then, are exporters both of goods and of capital.

Next there is the stage of *Mature Creditor-Lenders*.

These are nations whose interest income is so large that they can afford to have a negative ('unfavourable') Balance of Trade, to buy more goods and services than they sell. They can not merely afford to do so, they *must* do so. For if they insist on selling more than they buy, the resulting balance, together with the interest income, can only be lent to other countries and induce an even more rapid increase of interest income. If a nation, or a man, continues to lend, a time must come when his interest income is greater than his work income, and when he must consequently consume more than he produces. The analogy between nation and individual, however, breaks down here. For the last stage of Man is senile decay, and there is nothing senile or decaying about Mature Creditor-Lenders among nations. They are still lending and increasing their wealth, still living handsomely within their means. Some people have an instinctive horror of a negative Balance of Trade, of importing more than is exported. But it means no more than that the fruits of past savings have released the nation from the necessity of paying now in goods for all the foreign goods it now consumes.

The sixth stage is the only one with a faint air of senile decay. It is the stage of the *Creditor-Borrowers*. These are nations which are creditors—that is, they have an interest income from their past investments. But their negative ('unfavourable') Balances of Trade are so large that interest receipts are unable to fill the gap, and they have to borrow in order to square the accounts. 'Borrow' is here used in a sense analogous to that of 'lending' in the case of Debtor-Lenders. Creditor-Borrowers very rarely actually incur new debts to other countries—they recall some of their past foreign loans or sell some of their foreign investments. They can be compared to an investor who is living beyond his

means and drawing on capital. It is clearly not a state of affairs that can last indefinitely. As we shall see, Mature Creditor-Lenders are sometimes, in periods of crisis, forced into the category of Creditor-Borrowers, but it is not a position in which any country can afford to be for more than an exceptional year or two.

These six stages have been treated as if they were (with the exception of the last) a regular process through which every nation had to make its way, just as a man progresses from youth to maturity. But this is not necessarily true. Some countries, indeed, do go through the whole process, although the compilation of Balances of Payments is such a recent development that we have no accurate statistics to trace the course of any nation. The nearest approach to accuracy is in the case of the United States. Until the 1870's America was an Immature Debtor-Borrower, importing both goods and capital. After about 1873, however, the total of interest payable began to exceed the new borrowings, while the enormous development of the country produced the export surplus which enabled the interest to be paid. From this time until 1914, America was a Mature Debtor-Borrower, a net exporter of goods, though still borrowing afresh each year part of what she paid in interest. In the brief period of the war in 1914–18 the United States was enabled to run through the next two stages. The terrific exports of war materials enabled her not only to redeem all her outstanding debts, but even to become a net lender. Not only so, but her interest income rapidly became so large that she was able to import more goods and services than she exported, in other words, to become a Mature Creditor-Lender. Her status in the last group was not very securely established in the years immediately after the war. In

NATIONAL BALANC

(The figures are annual averages of the th

	Balance of Trade, Visible and Invisible. (1)	Interest Recei or Payments (2)
I. IMMATURE DEBTOR-BORROWERS—		
Germany	−658	−136
Australia (*a*)	− 31	−170
Poland	− 41	− 33
Hungary	− 47	− 25
Japan	− 39	− 7
Norway	− 3	− 18
Finland	− 8	− 9
Bulgaria	− 3	− 7
II. MATURE DEBTOR-BORROWERS—		
China (*a*)	+ 24	−117
Argentine (*b*)	+106	−185
South Africa (*c*)	+ 32	− 78
New Zealand (*d*)	+ 21	− 44
Yugoslavia	+ 8	− 21
India (*d*)	+107	−116
Canada (*c*)	+162	−169
Denmark	+ 13	− 15
III. DEBTOR-LENDERS—		
Dutch East Indies	+142	−140
Italy (*e*)	+ 33	− 18
Czechoslovakia	+ 66	− 16
IV. IMMATURE CREDITOR-LENDERS—		
Sweden	+ 47	+ 7
Belgium (*f*)	+ 53	+ 53
V. MATURE CREDITOR-LENDERS—		
Netherlands (*g*)	(−144)	(+ 160)
France (*h*)	−(*i*)	+(*i*)
United Kingdom	−719	+ 1217
United States	−133	+ 686
VI. CREDITOR-BORROWERS—		
None.	...	...

(*a*) Year 1928–29 only.
(*b*) Two years, October 1927 to September 1929 only.
(*c*) Gold is exported from South Africa and Canada as a commodity not for monetary reasons. It is therefore included in Column
(*d*) Three years, April 1927 to March 1930.
(*e*) Year 1927 only.

)F PAYMENTS, 1927–1929

ars, 1927, 1928, and 1929, in millions of dollars)

Balance on ıcome Account. (1)+(2). (3)	Gold. (4)	Lending or Borrowing. (5)	Balance on Capital Account. (4)+(5). (6)
−794	− 53	+847	+794
−201	+ 13	+188	+201
− 74	− 16	+ 90	+ 74
− 72	− 1	+ 73	+ 72
− 46	+ 6	+ 40	+ 46
− 21	0	+ 21	+ 21
− 17	0	+ 17	+ 17
− 10	0	+ 10	+ 10
− 93	− 2	+ 95	+ 93
− 79	− 13	+ 92	+ 79
− 46	(c)	+ 46	+ 46
− 23	+ 4	+ 19	+ 23
− 13	0	+ 13	+ 13
− 9	− 65	+ 74	+ 9
− 7	(c)	+ 7	+ 7
− 2	+ 3	− 1	+ 2
+ 2	− 5	+ 3	− 2
+ 15	− 8	− 7	− 15
+ 50	0	− 50	− 50
+ 54	− 2	− 52	− 54
+106	− 38	− 68	−106
(+ 16)	(+ 10)	(− 26)	(− 16)
+430	−190	−240	−430
+498	+ 11	−509	−498
+553	+ 70	−623	−553
...	...	...	...

) Including Belgian Congo ; year 1929 only.

) The figures for the Netherlands being more than usually approximate are placed in brackets.

) Including French Colonies other than Indo-China.

) The French figures do not separately distinguish the constituent items of the current account.

in-payment of $106,000,000 per annum, that is, she sold $106,000,000 worth of goods and services more than she bought.

Column (2) shows in a similar way the effect of payments and receipts of interest, a plus sign meaning a net receipt of interest, a minus sign a net payment. This column indicates whether the country is a creditor or a debtor. Debtors pay interest and have a minus sign ; creditors receive interest and have a plus sign.

Column (3) is arrived at by adding columns (1) and (2) together. This column shows the net total of the income, or current account, of the Balance of Payments—in other words the Foreign Surplus. The sign of this column denotes whether a country is a Borrower or a Lender. If the sign is minus, that means that the country has a net excess of out-payments on income account, and has to borrow to square its accounts. If the sign is plus, the country is a Lender.

The six categories of countries can thus be distinguished by the signs of the first three columns of the table, as follows :

	Balance of Trade, Visible and Invisible. (1)	Interest Receipts or Payments. (2)	Foreign Balance. (3)
Immature Debtor-Borrowers	−	−	−
Mature Debtor-Borrowers .	+	−	−
Debtor-Lenders . . .	+	−	+
Immature Creditor-Lenders	+	+	+
Mature Creditor-Lenders .	−	+	+
Creditor-Borrowers . .	−	+	−

The distinction between a Creditor and a Lender, or between a Debtor and a Borrower, should be borne clearly in mind. The words "Creditor" and "Debtor"

refer to what has happened in the past, a Creditor being a nation which has lent in the past, a Debtor a nation which has borrowed in the past. Lending and Borrowing, on the other hand, refer to what is happening at present. Unfortunately this distinction is frequently not made in public discussions of the subject. One frequently hears, for instance, a phrase such as 'creditor on current account' when all that is meant is 'Lender.' A Lender is usually a Creditor, and vice versa, but by no means always.[1]

The second group of columns constitutes the capital account. Column (6), which is the net balance on capital account, must of course be equal, but opposite in sign to column (3). The column of Gold is easily compiled from the trade statistics. In this column a plus sign means an export of gold (*i.e.* an in-payment, or inflow of funds to pay for the gold exported) ; a minus sign an import of gold. Column (5), which represents the total of lending, or borrowing, as the case may be, is entered at the figure which will exactly fill the gap between columns (4) and (6). In some countries, notably the United States, we have direct estimates of the volume of lending or borrowing ; but in the great majority the figure can only be found by inference, and it has seemed

[1] Another possible point of confusion may be cleared up. 'Lending' must be taken to include 'repaying debt,' and similarly 'Borrowing' must be taken to include 'drawing on capital.' Repaying debt is, of course, a different thing from lending, but the inclusion of both under one head can be excused on two grounds : first, both have the same effect on the Balance of Payments, both lead to an outflow of capital, and both increase assets relatively to liabilities (either by increasing assets or by diminishing liabilities) ; and secondly, it is impossible in practice to distinguish them. Similarly, borrowing and drawing on capital have the same effect and are practically indistinguishable. It has already been pointed out that 'Debtor-Lenders' could with equal justice be called 'Debtor-Repayers.' Similarly, 'Creditor-Borrowers' would frequently be more appropriately called 'Creditor-Drawers-on-Capital.'

best, in the table, to treat every country in the same way.

The years which this table covers were the nearest approach to stability that the post-war world has enjoyed. Every country but one in the table was on the gold standard, prices were reasonably stable, the monetary mechanism appeared to be working with tolerable smoothness. Nevertheless many of the seeds of disequilibrium can be seen at a glance. The first point to be noticed is the large figures entered in column (3). The six Creditor-Lenders were piling up Foreign Balances to the combined total of nearly $1,660,000,000 a year. Moreover, one considerable Creditor-Lender, Switzerland, is missing from the table. This vast sum would at once lead to the suspicion that lending and borrowing were being undertaken on a scale far larger than could be accommodated in International Investment.

Secondly, the figures in column (4) are rather too large. The total of the figures in this column (disregarding the sign) is 17 per cent. of the total of the figures in column (3). This would roughly indicate that only some 83 per cent. of Foreign Surpluses were being met by lending or borrowing, the remainder being met by shipments of gold. Moreover, the entries in this column are net figures and the averages of three years; and two at least of the three, if shown separately, would reveal larger movements of gold than the average. It is clear, then, that the volume of international lending in these years fell considerably short of the available Foreign Surpluses.

Thirdly, the position of several of the countries on the list was unsatisfactory. There is no criterion, for example, by which Germany could properly be described as an Immature Debtor-Borrower. She was neither a young country nor did she offer particular opportunities

for the development of export trade. Her position at the head of the list was an unnatural one, the artificial aftermath of Reparations and inflation. Money lent to Germany could only in the most exceptional circumstances be regarded as International Investment, likely to be fruitful in the future. Australia's position is not so obviously inappropriate. But one would have thought that Australia should have progressed at least to maturity as a Debtor-Borrower. Compared with South Africa, New Zealand, or the Dutch East Indies, she makes a poor showing. Moreover, the amount of her borrowing is very large. The other countries in the first class are a rather surprising collection, and there is barely one of them which would be placed there if its stage of economic development were taken as the criterion. It must, however, be remembered that the newer and poorer countries, which are more likely to be Immature Debtor-Borrowers, are not represented in the table owing to the absence of data. Many of the South American states and British colonies would probably be found in this class if the facts could be known.

These are the elements of disorder which emerge from the table. But there were others below the surface, which cannot be read from the figures, but which are nevertheless common knowledge. The table tells us that Foreign Surpluses were very large and that a substantial portion of them was not lent but hoarded in gold. What the table cannot tell us is that, of the large sums borrowed and lent, comparatively little would qualify as International Investment. Germany's borrowings, for instance, were to some extent utilized to re-equip her industries and to increase their competitive capacity in the world's markets. But loans were also far too readily raised for such purposes as the increase of banking capital and the provision of municipal swimming

baths or public buildings, which, though admirable in themselves, did nothing to increase Germany's future exporting ability. Australia's borrowings were also very largely used to cover Budget deficits and to finance public works schemes whose contribution to future exports was, at the best, indirect. Neither Germany or Australia took any steps to enable itself in the future to pay interest out of its own resources on its borrowings, still less to repay the principal sums borrowed. And what has been said of Australia and Germany could be said with very little alteration of most of the other borrowers in the list, certainly of the Immature Debtor-Borrowers.

It is useless, however, to be over-severe with the Borrowers, for the lending nations were committing as grievous, and as obvious, errors. Great Britain, before the war, was the Creditor-Lender *par excellence.* In playing this rôle she had built up in the City of London an extensive and efficient machinery for making long-term issues to foreign countries. After the war, however, her Foreign Surplus was relatively smaller than in the pre-war era. The reasons for this were two-fold, and have already been mentioned : the disadvantages incurred by the British export industries owing to wartime changes in the channels of trade ; and the fact that the pound sterling was stabilized in 1925 at a rate of exchange which seriously over-valued it. Great Britain should, then, after the war have reduced her foreign lending in proportion to the reduction in her Foreign Balance. But the concentration of the City of London on foreign issues to a large extent prevented this, and in many of the post-war years British long-term foreign lending actually exceeded the Foreign Surplus. At the same time the effort to maintain the pound sterling at its over-valued rate imposed on the Bank of England a

policy of high interest rates, with the result that short-term capital was attracted to London. London was, in fact, 'borrowing short and lending long,' and when her short-term creditors demanded repayment in 1931 she was unable to realize her vast, but fixed, foreign assets. It must be mentioned, however, in fairness to Great Britain, that her policy incommoded herself more than others and that throughout this period Great Britain continued to set an example to other creditors by accepting the payment in goods of interest due to her.

The United States, in the years between the Great War and the Great Depression, was the largest lender (though not the largest creditor) in the world, and it was very largely the size of the American Foreign Surplus that swelled to dangerous proportions the total volume of international borrowing and lending. The United States was largely unaware of the change which a few years had effected in her international status. Her Foreign Surplus was unnecessarily large because she clung to the belief (appropriate enough in her pre-war stage as a debtor) that exports of goods must always exceed imports of goods, and enforced this belief with one of the highest protective tariffs in the world. Fortunately the Balance of Invisible Trade (in which the United States bought much more than she sold) escaped by its very invisibility from the attentions of politicians. The large Foreign Surplus of the United States would not have been so objectionable if it had been properly employed, but it was not. The volume of lending (whether International Investment or not) fluctuated very widely, leaving a large gap to be filled by imports or exports of gold; \$216 millions of gold were imported in 1924 and \$102 millions exported in 1925; \$272 millions were exported in 1928 and \$120 millions imported in 1929. Until the onset of the depression there were only two

post-war years (1920 and 1926) in which the net movement of gold into or out of the United States was less than $100 millions. The figure of $70 millions exported in the table on page 399 is an average of $6 millions imported in 1927, $392 millions exported in 1928, and $175 millions imported in 1929. Furthermore, even such lending as was carried out was very rarely International Investment. New York had little experience as an international lender; her bankers yielded too quickly to the lure of a craze and to the temptation of immediate profits, without inquiring sufficiently into the uses to which the funds were to be put or into the prospects of repayment. Some of the United States' loans to South America in 1928 are almost perfect examples of all that an international loan should not be. Throughout the whole period American financial policy made no attempt to provide for the natural consequences of American lending. The payment of interest in goods was not facilitated; on the contrary the American tariff was drastically increased in 1930.

France, the third of the trio of large Creditor-Lenders pursued an equally mischievous policy. In contrast to the over-valuation of the pound sterling, the franc was stabilized at a figure which seriously under-valued it. The result was that the French Foreign Surplus was far larger than the willingness of the French investor to place his money abroad, or than the technical ability of the French money market to place foreign issues. In addition, the French Government positively discouraged long-term foreign issues. The result was that France, with a Foreign Surplus (on the average of 1927–29) nearly as large as that of Great Britain, lent less than half as much, taking the balance in gold. Moreover, even those sums which are counted as lent were in fact

merely deposited in banks in London, New York, and other centres. So far as International Investment as defined above is concerned, France accomplished very little indeed in these years.

The international capital market in these years was thus very far from a normal adjustment. Of the three great lending nations two were keeping their Foreign Surpluses at artificially high levels—America by prohibitive tariffs, France by under-valuation of her currency; Great Britain, with more experience as a lender, was working herself into the position of being unable to meet her own obligations. These three countries between them were piling up Foreign Surpluses at the rate of nearly $1,500 millions a year. The sum was excessive, but two out of three of the great creditors recognized no remedy save the continuance, on an ever-expanding scale, of uneconomic loans to the debtors. The debtors in their turn were apparently content to go on borrowing at high rates of interest without thought for the morrow of repayment. Too much was being lent; it was being lent in the wrong way, and borrowed for the wrong purposes. Such a situation could not possibly continue; it could not possibly be regarded as the same sort of healthy development as that by which the British Dominions and several of the South American countries had built themselves up in the decades before 1914. It was usury, based upon an unequal distribution of international purchasing power, rather than the wholesome process of accumulating international capital.

There were many other causes, discussed in the previous chapter, for the collapse of the international gold standard. But whatever monetary standard had been in force, lending and borrowing policies such as these would have brought about a collapse of the international financial machinery. The total of Foreign

Surpluses so greatly exceeded the volume of International Investment that maladjustment was inevitable. For the moment the position was partly obscured by borrowing—it was as if, in the individual sphere, one set of persons were living beyond their incomes to such an extent that the excess of Saving over Investment of another set of persons was offset. But the position was precarious. For borrowing of this nature cannot in any case continue indefinitely; sooner or later interest payments have to be met, and if the borrowings have not been wisely invested, there is no increase in exports out of which to pay the interest. And if nations come to depend on foreign borrowings, not for their capital development but to finance their ordinary current requirements of imported goods, a cessation of international lending will cause a serious upset in their economic structure. The large volume of international lending in the years 1927 and 1928 was nothing but a screen for the underlying maladjustments, a palliative for the fundamental defects of the international capital market.

The screen was torn away in the years following 1929. Long-term lending by the United States ceased after the end of 1928; the speculative excitement on the New York Stock Exchange and the high rates of interest obtainable there provided a more attractive use for funds, not only for American capitalists but even for those of Europe. After the crash in the autumn of 1929 confidence was too badly shaken to permit of any issues. During 1929 and most of 1930 the American banks continued to make short-term loans to foreign countries, especially Germany. British lending also kept up fairly well; public issues of overseas loans in the London market were £94,000,000 in 1929 and £109,000,000 in 1930. France, on the other hand, ceased even to make short-term deposits abroad, and began calling in the

short-term loans previously made. The volume of foreign lending was thus severely contracted, and an increasing proportion of it was in the form of short-term loans, which cannot be used for International Investment. The position was thus sensibly deteriorating.

Depression turned to crisis in 1931. This is not the place to describe the course of the revolving storm which hit one country after another. The short-term credits, which almost alone had kept the system going for two years, first ceased and were then recalled. First Austria and Hungary, then Germany, were forced to prohibit the repayment of foreign capital as the only alternative to allowing their currencies to depreciate. Great Britain, caught off her guard by her short-term creditors, and unable to mobilize her long-term assets, preferred depreciation to 'blocking.' The net effect of the series of crises was that international lending came to a complete stoppage.

The borrowing countries were consequently faced with the problem of balancing their accounts without the assistance of further loans. One item which had previously bulked large among the positive, or in-payment, items of their Balances of Payments suddenly disappeared. Many of the borrowing countries, particularly those outside Europe, were in addition afflicted by the fact that the prices of their staple exports declined far more rapidly than the prices of their imports. For both of these reasons there was a large gap on the in-payment side of their Balances of Payments. Balance could only be achieved in one of two ways: either by expanding exports or by reducing imports. An expansion of exports being out of the question in the collapsed state of the world's markets, a contraction of imports became the only remedy. This was brought about by a variety of means: by greatly enhanced tariffs; by import quotas,

and even outright prohibition; by exchange control rationing the supply of foreign currencies by which alone payment for imports could be made; by depreciation of the currency, making imports more expensive and hence reducing the demand for them.

These measures on the part of the debtors greatly reduced the exports of the creditors, and threatened the appearance of a gap in *their* Balances of Payments. Great Britain in 1931, for example, had a negative Foreign Surplus owing to the decline in her sales of goods and services and the reduction of her interest income from overseas; she was forced—for the first time, except during the war of 1914–18—from the position of a Mature Creditor-Lender into that of a Creditor-Borrower. Great Britain attempted to correct this position—first, by the depreciation of the pound, which tended automatically to stimulate British exports and restrict British imports; and second, by the desertion of her Free Trade principles and the imposition of a general tariff on foreign imports. But the restriction of imports into Great Britain, the largest free market in the world, unbalanced the Balances of Payments not only of the debtor countries but of many of the creditors, and there was throughout 1932 and 1933 an orgy of tariffs and restrictions of all kinds. Thus each group of countries, in trying to balance its accounts, unbalanced those of another group, and the general rush to cut down imports led to an equally general restriction of exports. The value of international trade was cut down in 1933 to a third of its value in 1929, but the process of restriction had benefited nobody.

The suspension of international lending thus set in train as vicious a spiral of deflation in the international sphere as did the suspension of Investment in the domestic sphere. The two in fact acted and reacted upon each other, for exchange stringency caused domestic

deflation, and domestic deflation lessened the willingness to lend capital abroad.

This state of affairs is illustrated by the table on pages 412–13, which has been compiled by the same method, and is subject to the same qualifications, as that on pages 398–99. It shows in outline the average figures of the Balance of Payments of a number of countries in the depression years 1931, 1932, and 1933. The figures are all in millions of American gold dollars[1] and are thus directly comparable.

The contrasts between this table and the preceding one are strikingly apparent. The lenders have almost disappeared. Of the three great Mature Creditor-Lenders, Great Britain and France have been forced to draw upon, instead of increasing, their capital. The United States remains as a Mature Creditor-Lender, but the term 'lending' does not properly reflect the position, for the outflow of capital from the United States represents in the main the repatriation of short-term balances previously held in New York by foreigners. America was not lending, but repaying her banking debts.[2] The same applies to the 'Debtor-Lenders' who

[1] *i.e.* in "old" gold dollars; that is, dollars of the gold content prevailing before the depreciation and devaluation of the dollar in 1933–34.

[2] The fluctuations in the capital account of the United States in these years were as follows (a plus sign, as in the main table, denoting an inflow of capital, a minus sign, an outflow):

Year.	Long-Term Capital.	Short-Term Capital.	Total.
1930	−224	−465	−689
1931	+233	−719	−486
1932	+247	−489	−242
1933	+ 39	−383	−344
1934	+202	+184	+386

(These figures are compiled by direct estimate and do not therefore coincide with the average in the main table.) The repayment of short-

NATIONAL BALANCES

(The figures are annual averages of the three years

	Balance of Trade, Visible and Invisible. (1)	Interest Receipts or Payments. (2)
I. Immature Debtor-Borrowers—		
Argentine (*a*)	− 60	−138
India (*b*)	− 2	− 94
Hungary (*c*)	− 1	− 15
II. Mature Debtor-Borrowers—		
Canada (*g*)	+ 82	−170
Australia (*d*)	+ 90	−125
Dutch East Indies	+ 22	− 51
New Zealand (*e*)	+ 17	− 36
Japan (*c*)	+ 5	− 11
Norway	+ 11	− 16
Denmark	+ 14	− 14
III. Debtor-Lenders—		
Czechoslovakia	+ 16	− 10
Poland (*c*)	+ 48	− 40
Finland	+ 30	− 9
S. Africa (*c*) (*g*)	+ 93	− 64
Germany	+334	−222
IV. Immature Creditor-Lenders—		
None.	..	..
V. Mature Creditor-Lenders—		
Sweden	− 5	+ 12
United States	−327	+466
VI. Creditor-Borrowers—		
France (*h*)	−210	+ 57
United Kingdom	−825	+598

(*a*) Two years, October 1929 to September 1931.
(*b*) Three years, April 1931 to March 1934.
(*c*) Two years, 1931–32 only.
(*d*) Three years, July 1930 to June 1933.
(*e*) Three years, April 1930 to March 1933.

1931, 1932, and 1933, in millions of gold dollars)

Balance on Income Account. (1)+(2). (3)	Gold. (4)	Lending or Borrowing. (5)	Balance on Capital Account. (4)+(5). (6)
−198	+ 90	+108	+198
− 96	+164	− 68	+ 96
− 16	− 1	+ 17	+ 16
− 88	(e)	+ 88	+ 88
− 35	+ 50 (e)	− 15	+ 35
− 29	+ 15	+ 14	+ 29
− 19	+ 5	+ 14	+ 19
− 6	+111	−105	+ 6
− 5	+ 3	+ 2	+ 5
0 (f)	+ 4	− 4	0
+ 6	− 2	− 4	− 6
+ 8	− 4	− 4	− 8
+ 21	0	− 21	− 21
+ 29	(g)	− 29	− 29
+112	+140	−252	−112
..	..	..	..
+ 7	+ 1	− 8	− 7
+139	+101	−240	−139
−153	−374	+221	+153
−227	−181	+408	+227

(f) Negligible negative balance.
(g) Gold is exported from South Africa and Canada as a commodity and not for monetary reasons. It is therefore included in column (1).
(h) Two years, 1932–33 only; includes French Colonies other than Indo-China.

in these years were 'Debtor-Repayers.' In spite of the plus signs in column (3) there was virtually no international lending. This statement is a little too sweeping to be true, as is shown by the presence of several considerable borrowers. To some extent borrowing in this table means 'living on capital,' just as 'lending' means 'repaying debt.' But it will be noticed that, with the exception of the Argentine, the largest 'borrowers' are the British Dominions, which continued to have some access to the London Money Market, and the Dutch East Indies, which stood in the same relation to the Amsterdam market. But this 'family' borrowing was on so small a scale that it can be treated as an exception to the general rule.

A second fact which can be noted is the considerable increase in the size of the figures in column (4). When the accounts cannot be squared by borrowing, and in the interim period while imports are being restricted, gold must be exported to cover the gap. Australia, the Argentine, Canada, and Japan all disposed of considerable portions of their gold reserves in this way, especially in the earlier part of the crisis. In India the higher price for gold which followed on the depreciation of the rupee tempted much gold out of hoards. Over the three-year period the Indian export of gold was considerably greater than the average negative Foreign Surplus to be covered; so that the gold export left a

term banking funds is in evidence in each of the four years 1930 to 1933, but in 1934 there was a return, either of American or of foreign capital, to the United States. Since 1930, the movement of long-term capital (*i.e.* bonds, securities, etc.) has been *into the United States*, *i.e.* the borrowers have been repaying their debts. These repayments have very largely taken the form of purchases by the debtor nations of their obligations at the very low prices to which they fell on the New York Stock Exchange. There were also in 1934 some purchases by foreigners of American industrial securities.

substantial margin after meeting the negative Foreign Surplus. Germany exported gold in addition to having a positive Foreign Surplus, and was thus enabled to repay much more of her debt than would otherwise have been possible. The great importer of gold was France, which took \$460 millions in 1930, \$727 millions in 1931, and \$826 millions in 1932, but lost \$78 millions in 1933. The table clearly demonstrates that this flood of gold was not due to a large positive Foreign Balance, as in the pre-crisis years, but to a stampede of frightened French capital back home to Paris. The figure entered in column (4) for the United States is rather deceptive, since large outflows of gold in 1931 and 1933 were partly offset by a small inflow in 1932. In the five years 1930–35, inflows and outflows of gold alternated from year to year.

After these remarks it is hardly necessary to point to the drastic changes in the listing of the nations. Germany, for example, was forced in a few months from Class I. to Class III. and had to attempt to modify her economic structure from being one accustomed to a considerable excess of imports over exports into one which exported more than it imported. The deposition of the United Kingdom from a Mature Creditor-Lender to a Creditor-Borrower is hardly less striking or less drastic in its effect on the international capital market. The figures reflect a complete collapse of international credit. There was very little lending, and it is quite safe to say that there was no International Investment at all. Some nations had to devise means of dispensing with the borrowing to which they had grown accustomed, others were frightened into withdrawing their capital from foreign centres. But whatever the impelling motive, every country joined in the mad race to build up a large positive Foreign Surplus—and since this was the common

object, none succeeded. International financial policy resolved itself into the one device of restricting imports. International trade as a result was throttled, industrial dislocation and unemployment followed in every country, but more especially in the great trading nations —and all to no object, for the international position of no country was any stronger or any more favourable as a result. It was Beggar-my-Neighbour in its starkest futility.

No words are too strong to condemn the idiocies of this period. But condemnation alone will not be of much profit. The panic once started, no nation could afford to be left out of it, just as in a burning theatre, although the interest of each member of the audience will be best served by the preservation of order, if once the rush to the doors starts it is to each man's interest to join in it. Nor should we lay all the blame on panic alone. An orderly retreat would indeed have had less catastrophic results ; but a reduction of foreign lending and a readjustment of their Balances of Payments by both creditors and debtors was in any event inevitable. Borrowing on the lines of 1927–29 could not in any case have continued. The loans were on too large a scale, to the wrong borrowers, and for purposes which made no provision for repayment. In the last analysis the blame must be laid on the pre-crisis world, which thought by borrowing to hide its lack of adjustment and stave off the necessary reforms, which preferred to hand on to the future a burden of debt rather than a wealth of capital, and which attempted to restore an international gold standard between national economies, none of which were being directed with international stability as the primary objective. In the result, the whole system of international capital, which might have contributed so powerfully to the increase of world-wide

wealth, was discredited. The debtors talked of interest slavery and gloried in default, while the creditors vowed to keep their money to themselves in future—as if money were of value when refused the chance to fructify. And both debtors and creditors barricaded themselves in self-sufficient economies whose jealousy threatened to be equalled only by their poverty.

Gradually, however, the adjustments were made. International lending was not resumed on the pre-crisis level—indeed it was hardly resumed at all. But in course of time the different nations succeeded in getting their accounts to balance without being compelled each year to throttle their import trade more severely than in the previous year. The upward phase of the trade cycle, reasserting itself in one country after another, diminished the readiness to blame the foreigner for unemployment, and made it possible to relax some of the restrictions that had been laid on international commerce. Slowly the level of prices and the volume of trade recovered. The third table, on pages 418–19, gives a picture of the international payments of the world after these readjustments. Unlike the two previous tables, its figures are not the average of three years, they refer only to 1937, the most prosperous year of this period of recovery.

The most noticeable feature of this table is the way in which the nations had crowded into the middle section of Debtor-Lenders or, more accurately, Debtor-Repayers. There was very little lending or borrowing going on. Of the three borrowers shown in the table, South Africa and Australia stood in a preferred position towards the London capital market, Poland towards that of Paris. Of the great Creditor-Lenders, only the United States was left—and she was only technically a lender, for she was importing gold to twice the amount of her

NATIONAL BALANCES

(The figures refer in the main to the year 1937:

	Balance of Trade, Visible and Invisible. (1)	Interest Receipts or Payments. (2)
I. IMMATURE DEBTOR-BORROWERS—		
None.	..	..
II. MATURE DEBTOR-BORROWERS—		
South Africa (*a*)	+ 23	− 62
Poland	+ 10	− 20
Australia (*b*)	+ 77	− 87
III. DEBTOR-LENDERS—		
New Zealand (*b*)	+ 22	− 21
Czechoslovakia	+ 19	− 11
Finland	+ 13	− 3
India (*b*)	+ 85	− 72
Denmark	+ 25	− 10
Norway	+ 25	− 10
Argentine	+151	− 90
Dutch East Indies	+121	− 48
Canada (*a*)	+251	−142
IV. IMMATURE CREDITOR-LENDERS—		
Sweden	+ 12	+ 15
United States	+277	+197
V. MATURE CREDITOR-LENDERS—		
Netherlands	− 40	+ 52
VI. CREDITOR-BORROWERS—		
France	−313	+154
United Kingdom	−787	+613

(*a*) Canada and South Africa are gold producers; gold is, therefore, included in merchandise.

ꟷ PAYMENTS, 1937

;y are in dollars of the pre-1933 gold parity)

Balance on come Account. (1) + (2). (3)	Gold. (4)	Lending or Borrowing. (5)	Balance on Capital Account. (4) + (5). (6)
..	..	..	..
− 39	(a)	+ 39	+ 39
− 10	− 14	+ 24	+ 10
− 10	+ 27	− 17	+ 10
+ 1	+ 3	− 4	− 1
+ 8	− 1	− 7	− 8
+ 10	+ 2	− 12	− 10
+ 13	+ 62	− 75	− 13
+ 15	0	− 15	− 15
+ 15	+ 5	− 20	− 15
+ 61	0	− 61	− 61
+ 73	+ 2	− 75	− 73
+109	(a)	−109	−109
+ 27	0	− 27	− 27
+474	−968	+494	−474
+ 12	−242	+230	− 12
−157	+255	− 98	+157
−174	−231	+405	+174

1936–37.

Foreign Surplus. Capital, in fact, was flowing into the United States rather than being invested by America in other countries, and gold had to be sent not merely to meet the positive (' favourable ') balance on income account, but to carry as well the great volume of capital flowing westwards across the Atlantic. The explanation is, of course, that the menace of war had risen in Europe, and most of Europe's liquid capital was seeking refuge in the safety of New York. The broad picture of the table is one of no fresh borrowing or lending, and a certain amount of repayment by debtors (*i.e.* previous borrowers) which enabled the creditors to import rather than export capital, and turn themselves into what we have termed Creditor-Borrowers. It is *not* a picture of a dynamic, constructive system of International finance; it is more like a bank in the hands of the caretakers.

THE PROBLEM OF THE STANDARD

In these circumstances, the controversy between the Gold Standard and the Managed Currency is rather beside the point. The only purpose of an international monetary system is to facilitate the smooth transfer of goods, services, and capital between nations. Like a domestic monetary system, it should endeavour to interpret accurately the desires of those who use it, without importing instability into a position which is in balance. But neither a domestic nor an international monetary system can be expected to work if it is made the vehicle of incompatible ambitions. If every individual in a nation is attempting to enrich himself solely by acquiring claims to the wealth of others (*i.e.* Saving without Investment), or, if each nation of the world is determined to sell the maximum, buy the minimum, and lend nothing, the monetary system, however it is

constituted or managed, cannot make sense out of nonsense or bring balance out of disequilibrium. Those who argue that international financial chaos can be solved by a return to the pre-war gold standard, and those who argue that all that is needed is the universal institution of freely fluctuating inconvertible currencies, are thus equally mistaken.

The gold standard is clearly unworkable, so long as the world is divided into a number of separate national economies, each of which puts its national interests first. There is no reason to believe that any of the causes of its collapse, discussed at length in the last chapter, have been removed, or will have been removed at the end of the present war. Some of them, indeed, are likely to be more potent than ever. The central truth is that no nation is willing to allow its economic structure to be regulated by the general average of world conditions. Each insists on retaining its economic sovereignty, its indefeasible right to pursue a policy of its own. So long as this feeling lasts, a gold standard, or any standard which postulates unvarying exchange rates, is impossible. A gold standard might, indeed, be patched up, and, buttressed with ample gold reserves, it might survive several decades. But it could only survive by failing to perform its function of disciplining, in the name of world economy, the national economies of each individual state. As soon as the divergences between these national economies became too large to be bridged by movements of gold, the gold standard would collapse anew.

Without some drastic change in the economic policies of the nations, we can therefore dismiss the gold standard as unworkable. But a system of freely fluctuating 'managed' currencies is likely to be hardly less unsatisfactory. This does not appear so spectacularly on the surface. There is nothing in a managed currency to

collapse, nothing to be so dramatically suspended, as in a gold standard. But if the task of an international monetary system is to encourage and facilitate economic intercourse among the nations, the post-1931 managed currency system failed as completely as the gold standard. The nations have indeed been free to pursue internal policies of their own choosing, but the hundreds of thousands of unemployed in the export industries have been silent witnesses to the limitations of the scope for a purely internal policy, however well-conceived and successfully executed. Fluctuating exchange-rates have not restored the nation's balances of payments to equilibrium and thereby removed the necessity for throttling restrictions on foreign trade.

It is instructive to consider what would have been the development of events if there had been no gold standard in 1929, when international lending came to an abrupt end. Loans constitute demand for the borrower's currency and supply of the lender's. Their cessation would consequently have led to a sudden fall in the currencies of the borrowing nations and a rocketing in the exchange value of the lender's currencies. The creditors would have found themselves unable to sell their own goods abroad owing to the comparative dearness of their money, while they would have been flooded with cheap imports from the debtor countries. Their reaction would, of course, have been to clap on sky-high tariffs and prohibitive quotas, which would have pushed their own currencies higher and the debtors' lower, and intensified the already existing divergence. Some debtors might have been assisted if their currencies had been free to fall at the very beginning of the depression ; but others were better served by the maintenance of exchange stability. There is no reason whatever to believe that fluctuating exchanges would

have quickly re-established a real equilibrium or that they would have provided a means of escape from the vicious circle of higher tariffs, default, and further restrictions.

On the other hand, if the underlying conditions are those of reasonable balance, either system is workable. Each has its defects and its advantages, and the choice between them must be decided by a scrutiny of comparative advantages. The gold standard limits the freedom of national monetary policies, but it also safeguards any nation against the excessive instability of which badly mismanaged inconvertible currencies have proved themselves capable. Its great advantage is that it assists the movement of international capital and international trade, and by thus pooling the resources of Man and Nature over the whole world, it contributes greatly to the rapid increase of wealth. The managed currency, on the other hand, though it makes trade and lending between nations difficult, and thus limits the extent to which the international division of labour can be carried, relieves each individual nation (in theory at least) of the necessity of submitting to periodic 'disciplining' to keep in step with the fluctuations of the world economy. It consequently enables each country to pursue a policy aimed at stabilizing the conditions of domestic industry. If the choice between the two systems needs to be put in one sentence, we can say that the gold standard should ensure more rapid, but less regular, progress, while 'managed' currencies have an opportunity to eliminate irregularities at the cost of a somewhat slower over-all rate of progress.

We are not concerned here to make a final choice between the two alternatives. There is no general solution; it is possible, for instance, that the gold standard is, on the whole, better for creditors, and

fluctuating exchanges for debtors. But a better reason for refusing to choose is that it is possible to look forward to a compromise between the two extremes. It may well be that the international monetary system of the future will be one in which the exchanges are kept stable within the short period, but are moved from time to time. The trend of events in the last few years has been in this direction. The institution by the British Government in 1932 of the Exchange Equalization Account was the first attempt to limit the fluctuations of a currency that had cut adrift from a rigid attachment to gold. Other countries, as they have left the gold standard, have followed the British example, and the *manifest absurdity of competition between the different* equalization funds has led to a certain degree of practical co-operation between the different national monetary authorities. The Tripartite Agreement signed by the British, French, and American governments in September 1936 derives its importance, not from the vague terms of its formal clauses, but from the fact that it stands as the symbol of this practical co-operation. The present monetary system of the United States stands half-way between the British and a formal gold standard. Since January 1934 a formal link has existed between the dollar and gold through the fact that the United States Treasury has been ready to buy gold, or to sell it to Central banks or governments, at the fixed price of $35 an ounce. But the President has retained the power to vary this price at any time within a certain range. The difference between the British and the American systems is that the dollar is formally, the pound informally, kept steady in terms of gold from day to day. Both currencies are, in fact, free to move if their authorities see fit.

This system of day-to-day stability, with freedom to

move if circumstances require a change, presents the best hope now visible of providing a foundation on which a new international system could be built. But there are many difficulties in the way before the building could start. The changes in parity would not have to be altogether arbitrary; they would have to command fairly general agreement, and would therefore have to conform to an agreed set of principles. For example, it would be necessary to agree that a nation should vary the gold parity or exchange parity of its currency in order to accommodate it to a movement in its internal price-level which has already taken place, and not in order to attempt to induce a movement of prices which is considered desirable. Changes in parity, in other words, should be designed to move the exchange rate of the currency *towards* the equilibrium rate indicated by the price-level, and not *away from* the existing equilibrium in the hope of establishing a new one. Again, changes should be designed to produce an equality between a nation's Foreign Surplus and the amount of foreign lending (or borrowing) it is prepared to do, and not to secure a temporary advantage for its exporters, with the corollary of an excessive Foreign Surplus. But, on the other hand, changes must not be reduced to rule-of-thumb, for if they are, speculators will be able to anticipate them and by their corresponding purchases or sales will be able to precipitate the change before it is due, thus interfering with the stability between changes which is the chief attraction of the system. In short, a system of this sort could only be worked by a form of international co-operation inspired by a certain degree of mutual trust and leaving room for the exercise of discriminating judgment. The Tripartite Agreement of 1936 seemed to provide the embryo of just such a new form of international collaboration.

But a compromise of this nature between complete stability and unlimited fluctuation would be as unavailing as either of the extremes between which it mediates unless the underlying conditions made a successful system possible. The problem is, not to evolve the technique of currency standards but to restore a sane balance between contrasting national economies. Without such a balance, no system will work. The balance once restored, it will matter comparatively little precisely which alternative is followed. The difference between them will in any case be far less than the gulf that separates any one of them from the wasted wealth, the frustrated endeavour, the muddle and the chaos that characterized the 1930's.

NATIONAL POLICY IN AN INTERNATIONAL SYSTEM

The task of restoration lies outside the sphere of purely monetary policy. It involves the economic policies of Governments rather than the financial devices of Central Banks. The fundamental condition for international equilibrium can be stated with comparative ease : the size of the Foreign Surplus must be equal to the volume of International Investment. It is the corollaries of this principle that present the trouble. For example, governments must learn that the success of their economic policy is not to be measured by the size of the Foreign Surplus, the so-called 'favourable balance' on income account of the Balance of Payments. On the contrary, part of the difficulties of the 1930's was due to the fact that there were excessively large Foreign Surpluses in the 1920's.

The pursuit of international equilibrium does not impose on governments an arbitrary and inconvenient set of imperatives—it demands only that they should

draw the elementary logic of their own decisions. They must realize, for example, that it is sheer nonsense to try to build up a large Foreign Surplus and then refuse to make loans to foreigners. A nation is entitled to say that it will not lend to foreigners. But if it does so, it must draw the logic of its own refusal and aim at a Foreign Surplus of exactly zero. (Such a policy is not inherently ridiculous : it is possible to envisage a balanced world order in which there was no new lending or borrowing. The rate of economic progress in such a world would be slower than in one where there was a free international flow of capital—just as the rate of progress inside a nation would be slower if lending and borrowing were unknown and the accumulation of capital were left entirely to those who could Invest out of their own Savings—but it would be a balanced economy without such deflationary wastage as followed on the crisis of 1929–31.) Or if they prefer, governments can aim at a large Foreign Surplus—but in that case they must take steps to see that it all goes not merely in foreign lending, but in foreign lending that can qualify as International Investment. The one thing they cannot do is *both* to have a large Foreign Surplus *and* refuse to lend abroad.

Nor does international equilibrium involve complete free trade. On the contrary, all it demands is that some adjustments shall be allowed, that tariffs shall not be clapped on to prevent every alteration of the *status quo.* A policy of international equilibrium demands only that nations shall not attempt to do individually what is collectively impossible.

So long as tariff-making and the general outline of currency policy remain matters for the Government, the Central Bank does not possess the same full powers over the sphere of a country's international economic relations

that it possesses over the details of domestic monetary policy. By its influence over rates of interest the Central Bank can do something—but not very much—to determine the volume of International Investment. But it has very little influence on the size of the Foreign Surplus, which may be dominated by the commercial policy of the Government. There is great need in this sphere for co-ordination of policy between the Government and the banking authorities. The Government, for its part, should, in granting tariffs or imposing embargoes, etc., bear in mind the size of Foreign Surplus at which it is aiming. And Government and banking authorities in collaboration, using the powers or the influence which they now possess in nearly every country, should attempt to limit their foreign lending (or borrowing) to this sum, and to see that it is applied in such a manner as to qualify for the description of International Investment.

These general remarks apply both to lenders and to borrowers. They apply whether there is a gold standard or a system of 'managed' currencies—the differences between the two being differences in the method of application of the principle rather than in the principle itself. In the case of the gold standard the duty of the managing authority is to see that the adjustments in the domestic price structure which are necessary to bring it into harmony with the world price-level are brought about as soon as possible. When exchanges are free to fluctuate, its task is to see that the exchange corresponds as closely as may be to the real 'equilibrium rate' of the currency. In either case, the task is to ensure that the internal and external values of the currency are in harmony.

These duties naturally set limits to the policy of purely domestic stabilization outlined in Chapter VI. The outer world being economically unstable, there is

a necessary conflict between national and international policy. This is an unfortunate fact, but it cannot be got rid of by deploring it. So long as a country has any economic relations with the unstable outside world, it cannot find perfect stability at home, and its policy must be a compromise between the ideal policy it would pursue if it were entirely isolated and the ideal policy it would pursue if stability of the relationship with the outside world were the only thing that mattered. Fluctuating exchanges do not provide any escape from this dilemma, although the contrary is frequently stated. Fluctuations of the exchange value of the pound sterling are reflected in fluctuations of prices inside Great Britain, while fluctuations of the exchange values of other currencies may have serious effects upon the course of British trade, and hence upon the economic situation at home. A system of fluctuating exchanges reflects the national aspects of policy more than the international aspects, while the gold standard pays more attention to international than to domestic objectives. But the difference between them is one of degree, not of kind. A gold standard imposes narrower limits upon national policy than an inconvertible system, but the limits are there under both systems. The choice is, ideally, between the long-term advantages of a close association with the world as a whole, with all its benefits of rapid increase of wealth, and the short-term advantages of being comparatively (but only comparatively) independent of the trade cycles of an unstable world. In practice, the choice depends on the extent to which the nation is prepared to submit knowingly to the discipline of external circumstances. Each nation must fashion the compromise which suits its interests best. But for modern industrialized nations, with their dependence on foreign trade and with their rigid social structure, both of the

extremes—the immutable automatic gold standard and the inconvertible currency which disregards the interests of foreign trade—are equally objectionable. Future progress lies along two lines. First, the evolution of some compromise between the two extremes which will provide the greatest amount of exchange stability compatible with differing national policies. And second, the pursuit in every country of those policies which are most likely to produce domestic and international equilibrium in the sense in which those words have been understood throughout this book. For if the outer world ceases to be unstable, the dilemma disappears. This, in the last analysis, is the crowning justification for advocating the restoration of a truly international monetary system. For without a stable world, no individual country can hope successfully to pursue a policy of domestic stability.

Our survey of the realm of money thus ends with an aspiration in the international sphere as in the national. Both between individuals and between nations we have found it possible to indicate in broad theoretical terms the method by which the monetary machine can be prevented from running amok and adding its own instabilities to those already existing. But in either sphere we have had to add two qualifications. Money, in the first place, cannot make sense out of economic nonsense; it is no magic to save an irrational world from the consequences of its acts. And in the second place, even if the world were sane and logical, we have not yet evolved a sufficiently smooth and rapid technique of monetary control. In the last few pages we have added the further discouraging fact that the best policy in one sphere may be hard to fit in with the best policy in the other.

We finish then with no panacea. This book is not a programme for the future. It is not a guide to the road

that lies ahead but a description of the way already trodden. If, therefore, we break off with many loose ends of dissatisfaction, that is no more than an admission that our knowledge of the monetary mechanism is incomplete and that our control of it is imperfect.

Money is the most wonderful of Man's social inventions. But it is his invention, his creation, and Man remains the master. This is perhaps the dominant fact that emerges from our study. For if we can get away from the idea that there is magic in money, if we can rid ourselves of the idea that happiness and prosperity depend on money alone, if we can reduce money to its proper rôle as a lubricant for the economic mechanism which Man's ingenuity directs and his labour drives, we shall have taken the longest stride on the road to understanding the monetary system and controlling our economic environment.

APPENDIX

SOCIAL CREDIT

(This Appendix reprints a series of four articles on Social Credit which appeared in the *News Chronicle* in May 1934. They are reprinted by kind permission of that newspaper. The only alteration that has been made in the original text is the omission of a few purely topical allusions and of the opening paragraphs in the second, third, and fourth articles, each of which was concerned only to summarize what had gone before.)

THOSE who take an active interest in either politics or economics have been well aware for some time past of the Social Credit movement. It has grown from a theory professed by a small band of enthusiasts into a full-fledged 'movement,' complete with its papers, its organizations, its uniforms, and its banners.

Why it should have a particular appeal to the general public I do not know. Social Credit deals with the extremely difficult and technical subject of monetary theory, which one would not expect to have a wide popular appeal. Moreover, the writings of its adherents are marked by obscurity rather than clarity, by ambiguity rather than by precision. The magnitude of its claims would be, one would think, a deterrent to many people; one is naturally suspicious of a theory which promises 'the abolition of poverty, the reduction of the likelihood of war to zero, rapidly diminishing crime, the beginning of economic freedom for the individual, and the introduction of the leisure State'—and all by means of simple bookkeeping.

I think it is this natural suspicion which explains how little one hears of the Social Credit movement in the Press. The Social Creditors believe that they suffer from a corrupt conspiracy of silence, but it is far more likely that they suffer from nothing more than the incredulous caution with which the working journalist treats all vendors of gold bricks or discoverers of El Dorado. Whatever the cause for the popularity of Social Credit, there can be no doubt about its present extent or about the fervour of its adherents. Nothing but good can come of the fullest possible discussion of a theory which has such an evident popular appeal.

The prophet of Social Credit is Major Clifford Hugh Douglas, M.I.Mech.E., who is, as the letters after his name imply, an engineer. In essence his doctrine is a series of financial proposals, but the net of Social Credit is thrown far wider than economics and embraces philosophy, politics, history, and a great many other subjects. On all these matters Major Douglas has his own individual views.

With some of these views I find myself in complete disagreement. I do not, for instance, believe that behind the visible government of the country there is an invisible government of bankers who deliberately maintain the poverty of the community to serve their own ends. I find it hard to believe that every movement for reducing the inequality of wealth—including, apparently, Socialism—is financed by 'Lombard Street, Wall Street, and Frankfort.' Nor am I quite so easily convinced as is Major Douglas that every one who disagrees with him—including, be it noted, every economist in every university in the country—is 'necessarily in the direct or indirect employ of banks or insurance companies.'

But these absurdities, though irritating, are minor matters, and with most of Major Douglas's views on the

wider aims of policy most people, or at least most Liberals, would agree. For example, Major Douglas recognizes the utter absurdity of trying to regain prosperity by restricting the production of everything—the fashionable doctrine of the moment. He calls this the ' doctrine of Sabotage,' and he is as sarcastic at its expense as any Free Trader. Prosperity, he says, can only come by producing more, not less goods. Further, Major Douglas wants to combine increasing wealth with increasing freedom—he has no patience with those who wish to regiment mankind into a pattern of uniformity. The class war and the exaltation of Nationalism are equally repugnant to him. On all these points, then, Major Douglas is quite definitely ' on the side of the angels.' He has the vision of a community of free, wealthy individuals ; his aim is to emancipate the human race from its bondage to the necessity of earning a living and to set it free to pursue its higher calling.

The Douglas theory starts, as any modern economic theory must, with the tragic paradox of Poverty in the midst of Plenty. Major Douglas, as an engineer, is rather apt to assume that the engineers have solved the problem of poverty, and that only the economists and the politicians stand in the way. In point of fact, the technical problem of producing goods is as small a part of the whole economic problem as engine-driving is of running a railway.

Nevertheless, it is obvious at a time like the present [1] that much more is wrong with the world than mere faulty organization. Why is it that nearly every factory in the world appears to be running at a loss and at a fraction of its capacity ? Major Douglas thinks he knows the secret. He says that, owing to a fundamental defect in the economic system, the public never has enough

[1] This was written in 1934.

money to buy the goods that industry produces. Now at first sight this appears to be obviously true. How often have we not heard the remark, 'There isn't enough money about these days.'? In what follows I shall be concerned with analysing this theory. But before doing so, one preliminary comment is not out of place.

If there is a fundamental defect in the economic system, it must presumably be always present. Major Douglas, in fact, explicitly says this is so. But there have been times when money seemed to be just as plentiful as it is to-day scarce. Anybody who remembers the twenty years before the (last) war, for example, or the years 1922 to 1929 in America, will remember the steadily growing prosperity of those periods. It seemed then to be possible to sell everything at a profit, and production could not catch up with the demand.

With this preliminary warning that what is true of one period may not necessarily be true of another, we can pass to an explanation of the Douglas theory.

The central doctrine of Social Credit is that consumers' incomes are too small to purchase at remunerative prices the goods produced by industry; in other words, that the present economic organization of the community involves a constant deficiency of purchasing power. How, according to Social Credit theory, does the deficiency of purchasing power arise? To understand this point a little preliminary explanation is required.

We all get our incomes by helping to produce goods or provide services. This is true even of the so-called 'leisured class,' for their land or their capital is helping to make things and earning an income for them. Every income, in the last analysis, is provided by industry and is therefore one of the costs of industry. But every income is also spent on the products of industry or on

the services of professional men, Civil Servants, cooks, housemaids, and so forth. Consequently, incomes can be looked at in two ways. In the first place, they are the costs of making things or providing services (wages, salaries, rent, dividends, interest, etc.), and in the second place they are the only source of demand for those things and services.

The economic process can therefore be represented as a circular flow of incomes. Business firms pay out sums of money which are the costs of making things; these sums of money are the incomes of those who help to make the things, and by being spent come back to the firms who paid them out. Major Douglas's theory is, in brief, that when these sums of money come back to buy the goods they are smaller than when they were paid out to make them. But if business is not to run at a loss, the price charged for the goods must be as great as the costs. Consequently, says Major Douglas, incomes are insufficient to pay the full price for all the goods produced.

How does this come about? The costs to a firm of making anything are of two kinds. First, there are those payments which immediately become the income of some individual, such as wages paid to workers, or dividends paid to shareholders. These Major Douglas calls 'A payments.' Secondly, there are payments made to other business firms for raw materials, for insurance, for interest on bank loans, etc. These, says Major Douglas, are 'B payments,' which do not form part of anybody's income. The total costs are, obviously, A plus B, and the price must be fixed at this amount. But the incomes available to buy the goods only amount to A, which is obviously less than A plus B. Hence, says Major Douglas, the deficiency; incomes are insufficient to buy at remunerative prices the products of industry.

The proposals for remedying the deficiency follow logically from this diagnosis of the trouble. The deficiency in people's incomes is to be made up by the State out of new money created by it for the purpose. On a certain day a decree will be issued saying that all prices are to be reduced by a certain fraction—let us say, for example, one half. A motor car which has hitherto sold for £200 is to be sold for £100, and the extra £100 will be paid to the car dealer by the State. It follows that everybody will be able to buy twice as much as before. The fraction by which prices are to be reduced will, of course, be chosen so as to make the total incomes of the community exactly equal to the total prices of goods offered.

The results of this reform are predicted to be startling. Since industry will at once become profitable, production will increase, and unemployment will disappear. But this will *only* be the beginning, for Major Douglas declares that it will soon be possible for 'all the necessary production of the country to be carried on by only a fraction of the working population.' There will consequently be a great increase in leisure for everybody. Everybody will be given an income—say, £300 per family—without needing to work, and only those will seek employment who want a higher income.

This, in brief, is the 'Douglas Theory.' I shall next offer a few comments on it.

Let us start with the A and B proposition. In order to simplify matters, let us assume that the production of bread is typical of all forms of industry. A number of people are engaged in producing bread: the farmer who grows the wheat, the merchant who brings it to the mill, the miller, the baker—and, of course, scores of others, whom, for the sake of simplicity, we will ignore.

Now let us suppose that it costs the farmer one penny

in wages, rent, and profit to grow the wheat for a loaf of bread. The merchant buys it from him for a penny, and his own costs, in wages to seamen, etc., in shipping it to the miller, are a further penny. He sells it to the miller for twopence. The miller's profit and wages bill amount to a further penny, and he sells the flour to the baker for threepence. It costs the baker one penny more in wages to his employees and in profit to himself, and he finally sells the loaf to the consumer.

Now each of these four persons has made A payments in wages or rent of one penny. The farmer had no B payments, but the merchant had a B payment of 1d. for the wheat he bought, the miller a B payment of 2d. for his raw material, and the baker a B payment of 3d. for the flour he bought. We can therefore say that total A payments were 4d. and total B payments 6d. Total costs were therefore 10d. and the A payments—the total consumers' incomes—were only 4d. It is, therefore, clear that consumers' incomes are inadequate to pay all the costs incurred in the process.

But there is no need for them to pay *all* the costs. The price of the loaf of bread is not 10d. but 4d., which is the cost to the baker of the flour plus the cost of baking it into bread. The costs incurred by the farmer, the merchant, and the miller are not *additional to* the baker's costs, they are *included in* the baker's costs.

Our preliminary conclusion, therefore, is that it is not necessary for consumers' incomes to be large enough to buy all the goods produced by industry. All goods can be divided into two categories : consumers' goods—those which people want for their own use and enjoyment ; and producers' goods—those which people want in order to help them make consumers' goods.

In the simple example we have given, bread is a consumers' good, wheat and flour are producers' goods.

We can express our conclusion, then, by saying that it is enough if consumers' incomes are sufficient to buy the consumers' goods offered.

If so, the price of everything else will be included. If the consumers have 4d. to spend on bread, the wheat and the flour and the cost of transport will all be paid for.

The next question is, then, this : Are consumers' incomes large enough to buy the total output of consumers' goods ? Major Douglas believes that they are not. To examine this question let us revert to our simple example of the process by which bread is produced. The question is : Does enough money get distributed in the course of this process to the incomes of consumers to buy the loaf of bread for 4d. ?

Let us examine what happens to the 4d. the baker gets for his bread. Some of it goes straight into consumers' hands by being paid in wages to the baker's employees. The rest of it is paid to what we may call, to distinguish them from consumers, business firms. But if every business firm which at any stage receives part of the original 4d. passes it on to somebody else, the whole 4d. must eventually come into the hands of consumers. It follows that the only way in which the whole 4d. would fail to get into consumers' incomes would be if some business firm failed to pass on some of the money it received—that is, if some firm hoarded some of its receipts.

Now let us examine some of the possibilities of this happening. The one on which the advocates of Social Credit lay most stress arises out of the making of loans by banks. When a bank makes a loan it lends *credit*, not actual *currency*. The distinction is not always realized, as most people are as ready (within reason) to take a

cheque as a pound note. But there is this vital difference, that although the banks cannot create currency they can (within limits) create credit. Consequently, when a bank makes a loan something is created which passes for money, and, conversely, when a loan is repaid some money is abolished.

Now, says Major Douglas, let us suppose that some one who has had a hand in making the loaf of bread—let us say the miller—has a bank loan outstanding. When that bank loan was made some additional money was 'created' by the bank—but that has been spent long ago. The miller now uses part of the 3d. he gets from the baker to repay the loan. The bank uses the money it receives to cancel the loan, and that much 'money' is 'abolished.' Here, then, would seem to be a clear case of a business firm (the bank) not passing on the money it has received.

This may happen, but if it did the bank's loans would be reduced by the amount of money which had been 'abolished.' If the bank cancels one loan and immediately makes another of the same amount, it has handed on to the second borrower the money it has received from the first. And this, we know by experience, is what happens in fact. The loans of British banks, for instance (in this connection a bank's 'investments' serve the same purpose as its 'advances'), sometimes diminish, but their general tendency is one of steady increase year by year. They are now nearly £50,000,000 larger than five years ago. In fact, therefore, no deficiency of purchasing power *necessarily* arises out of the use of bank credit.

A second cause of deficiency arises out of depreciation payments. Every firm which has a building or machinery puts aside each year out of its receipts a sum which will be sufficient to replace the building or the machinery

when it is worn out. This, again, appears at first sight to be a case of failing to pass money on. But though any single firm may accumulate this money for a number of years before it is spent, there will always be some firms which are spending their accumulated funds—that is, passing on *more* money than they are receiving at the moment. Consequently, if at any time in industry as a whole the money which is put by for depreciation is no larger than the money which is being spent out of accumulated funds, business firms as a whole are passing on as much money as they receive.

Now there are times when more is being accumulated than is being spent ; but there are other times when the reverse is true. There is no reason to believe that expenditure out of accumulated funds is *necessarily* and *always* less than the money put into the funds. It follows that these payments are not a necessary and continual source of a deficiency of purchasing power.

The most obvious reason for failing to pay out as much money as you receive is that you want to save. It should be noticed that this means saving in the very strict sense of hoarding money, because if you buy an investment you have handed your money on to the seller of the investment. But people sometimes do let their money pile up. If they are business firms, the result is that an equivalent amount of money fails to reach consumers' incomes. If they are consumers, the money has already got into their incomes, but it does not come out again. In either case, the result is that the amount of money spent by consumers is less than the cost of producing consumers' goods.

This I believe to be the truth of the matter. When money is allowed to pile up idly there *is* a deficiency of purchasing power. But two points should be noticed. *First,* this is nothing to do with the difference between

A payments and B payments, for the hoarding may be done by business firms or by consumers. In other words, I do not think there is anything in Major Douglas's 'A plus B proposition.' *Secondly*, it does not *always* happen. There are times when people are spending more than they are receiving, when they are reducing their idle hoards of money. And in such periods there is not a deficiency, but an excess of purchasing power.

The conclusion at which we arrive is, then, that Major Douglas is sometimes right (but even then not for the reasons he gives) and sometimes wrong. The real truth appears to be that the money spent by consumers is sometimes less than enough and sometimes more than enough to buy the goods offered. There is sometimes a deficiency, and sometimes an excess, of purchasing power. Moreover, even when there is a deficiency, it is not due to the reasons which Major Douglas gives, but merely to the fact that the community—whether consumers or business firms—is spending less than it receives as income and consequently allowing its money to pile up in idleness.

It remains to examine in the light of this conclusion the remedy proposed by Major Douglas—that is, the augmentation of consumers' expenditure out of money freshly created by the State for the purpose.

It would be obviously improper to apply the Douglas remedy in those periods when his theory is wrong, when there is not a lack but a surfeit of purchasing power. We have not had any period of this sort in Great Britain since 1920, but that is no reason for believing that they never occur. In America, as recently as 1928–29, there was a period of the wildest and most reckless expansion owing to a temporary excess of purchasing power. In almost every line of business, profits seemed to be as inevitable as losses are now, and production, however

much it was increased, seemed to be unable to catch up with demand. While it lasted this period was very enjoyable, but the fact that it was based on an artificial expansion of spending made the crash of 1929 inevitable. In periods such as this the lack of balance in the economic structure, the vicious process of inflation, is due to the fact that people are spending more than they receive in income. To give them still more to spend would obviously increase the trouble.

But what about the periods when Major Douglas is at least partly right—when there is a deficiency of purchasing power, whether or not it is due to the causes which Major Douglas expounds? Would it not be right in such periods to create fresh money for augmenting consumers' expenditure?

I believe that even in such periods as these Major Douglas's remedy would do more harm than good. I have a number of reasons for this belief, but there is space only for two.

The first reason is that Major Douglas's remedy is far too *big*. He suggests that consumers' expenditure, in order to be large enough to buy all the goods offered, needs to be not slightly augmented, but doubled, trebled, or even multiplied seven or eight times (he has never been very specific about the exact figure). Now this is far too high. In periods of depression the volume of goods of all kinds sold does not, in this country, fall by more than about a fifth, and the volume of sales of consumers' goods declines by much less than even this fraction. *There is no possible justification for increasing* consumers' expenditure by more than 20 per cent., even in the worst depression. To adopt his suggestion would mean converting a moderate deficiency of purchasing power into a wild excess—in other words, jumping from the frying-pan into the fire.

My second reason is that the creation of fresh money is not in any case the right sort of remedy. There is no shortage of money in this country to-day ; in fact, there is considerably more than there was in 1929. The deficiency of purchasing power arises, as we have seen, out of the fact that people are not using the money they have, that they are not spending all their incomes—including under 'spending,' of course, such forms of 'concrete saving' as the building of houses, factories, machines, and other forms of capital.

This being so, the obvious remedy is to persuade people to spend their present incomes, not to create more money. There are several ways of doing this. Cheap money is one way. The best way is to offer the public opportunities of spending their money, by way of investment, on increasing the capital resources of the country. To give the public additional incomes would probably result in their spending both the addition and also the previously unused portion of their incomes. A deficiency of purchasing power would again have been cured only by creating an excess.

I am not arguing that the only thing to do in a depression is to tighten the belt, to economise, to 'cut the coat according to the cloth,' to sit still and wait for better times, or any of the other conservative maxims. Any such philosophy is profoundly repugnant. I believe that there are ways of curing the depression, but they need to be much more flexible and scientific than the over-simple panaceas of Social Credit.

I have not been able in this short survey to penetrate every nook and cranny of the Social Credit doctrine, but I have tried to argue the central thesis fully, clearly, and—I hope—fairly. The final conclusion at which I arrive is not that Major Douglas is wrong. Far from it—I believe there is much that is valuable in his theories.

But I have been unable to find in them any teaching of value which is not to be found in the writings of scores of other economists, including some of those Professors and Lecturers whom Major Douglas gratuitously dubs the paid servants of the banks. The remedy he proposes I believe to be in no case the best available, and in most cases likely to do more harm than good.

In a sense, I am reluctant to come to this conclusion. It is always distasteful to disagree with enthusiastic idealism, especially when the objectives of the movement are so admirable. But the real pity is not that it is necessary to disagree, but that so much disinterested idealism should be enlisted in so unsound a cause.

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